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MRS. HENRY DRAPER.  
1839-1914.



ANNALS  
OF  
THE ASTRONOMICAL OBSERVATORY OF HARVARD COLLEGE

VOLUME 93

THE HENRY DRAPER CATALOGUE

7<sup>h</sup> AND 8<sup>h</sup>

BY  
ANNIE J. CANNON  
CURATOR OF ASTRONOMICAL PHOTOGRAPHS

AND  
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DIRECTOR OF THE OBSERVATORY

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CAMBRIDGE, MASS.  
PUBLISHED BY THE OBSERVATORY  
1919

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## PREFACE.

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THE Henry Draper Memorial is due to the unfailing devotion of Mrs. Draper to the memory of her husband. It is literally true that he never entered his observatory without her. For many years, and until her health failed, she frequently came to Cambridge to see the progress of the work devoted to his memory. At the very last, she showed the greatest interest in the results attained. It seems, therefore, very appropriate that her portrait should appear as a Frontispiece of this, the third volume of the greatest work yet undertaken as part of the Henry Draper Memorial.

EDWARD C. PICKERING,  
*Director of the Observatory of Harvard College.*

CAMBRIDGE, U.S., *December 25, 1918.*

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## THE HENRY DRAPER CATALOGUE.

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THE Henry Draper Catalogue originated in the attempt to collect in a single catalogue a description of all the stellar spectra which could be classified on the photographs of the Henry Draper Memorial. It was shown in May, 1885, that by placing a prism in front of the objective of a photographic telescope, excellent spectra could be obtained of all the stars of sufficient brightness in the field of the instrument. The immediate effect was that the photographic image of each star, instead of appearing as a point, was spread into a line, the rays of different wave lengths being diverted by the prism to different points upon the plate. These lines were then broadened into bands by giving a rate to the driving clock differing slightly from sidereal time. The principal lines in the spectra appear in these bands. The advantages of this method are, first, that the spectra of several hundred stars can be obtained on a single photograph, while with a slit spectroscope only one star can be photographed at a time. Secondly, the loss of light is so small that, even if stars are faint, satisfactory spectra can be obtained. Thirdly, the spectra can be identified with certainty, since they occupy the same relative positions on the photographs as stars on a chart plate, or map.

The classification of the spectra required for the Henry Draper Catalogue was begun by Miss Annie J. Cannon on October 2, 1911, and practically completed September 30, 1915. Some additional spectra were taken from later plates, where faint stars had not been classified previously. The total number of spectra classified is 242,093, relating to about 222,000 stars. The greater portion of the northern stars were classified from 709 plates taken with the 8-inch Draper Telescope, mounted at Cambridge. In like manner, 1,409 plates of the southern stars were used, taken with the Bache Telescope, mounted at Arequipa, Peru. Each of these instruments has, for an objective, an 8-inch Voigtländer Portrait Lens, corrected by Alvan Clark and Sons. Two prisms having angles of  $13^{\circ}$  and  $5^{\circ}$  were originally used with each instrument. They formed spectra having a dispersion such that for the 8-inch Draper Telescope the intervals between the lines  $H\beta$  and  $H\epsilon$  were 5.61 and 1.60 mm., respectively.

The corresponding intervals for the Bache Telescope were 5.80 and 2.23 mm. It appeared that the definition was better with the prism giving the larger dispersion attached to the 8-inch Draper Telescope, and with the prism giving the smaller dispersion attached to the Bache Telescope. For this reason, the spectra of much fainter stars could be classified from the photographs taken in Arequipa, than from those taken in Cambridge. Exceptions were made in the case of southern stars which are too dense on plates of small dispersion, and of northern stars so near together that their spectra are superposed on plates of long dispersion. Some northern stars between  $0^{\circ}$  and  $+10^{\circ}$  in declination were also classified from plates of short dispersion taken in Arequipa.

In November, 1900, two prisms, having nearly equal angles of about  $6^{\circ}$ , were attached to the 8-inch Draper Telescope. They were mounted so that they could be rotated by any desired amount, which was measured by means of a graduated circle. When placed in opposite directions they nearly neutralized each other, while, when turned in the same direction, the dispersion was double that of one of the prisms. The angles adopted were such that the dispersions were the same as those previously employed, 5.61 and 1.60 mm.

A number of photographs showing fainter stars were taken with the 16-inch Metcalf Telescope. The regions selected were the centres of the Harvard Standard Regions described in H.A. 14, 477, and a few others, such as the Pleiades, Praesepe, etc. The distance between the lines  $H\beta$  and  $H\epsilon$  was here 3.90 mm.

On all of the plates described above, the spectra of the bright stars were dense, so that they could not be classified. Accordingly, spectra taken with a larger dispersion were used. For stars north of declination  $-20^{\circ}$ , from one to four prisms were attached to the 11-inch Draper Telescope. The interval between the lines  $H\beta$  and  $H\epsilon$  varied from 19.63 to 80.50 mm. These spectra have already been described in H.A. 28, Part 1, but as a different system of classification was there employed by Miss Maury, the spectra were again classified by Miss Cannon. This work was extended to stars of the fifth magnitude, and a few that were fainter, by means of H.A. 56, No. 4. For the southern stars, brighter than the sixth magnitude, the spectra are taken from H.A. 28, Part 2, and H.A. 56, No. 5. From one to three prisms were employed, and the interval from  $H\beta$  to  $H\epsilon$  varied from 21.57 to 72.15 mm.

From August, 1885, to November, 1894, Seed 26+, from December, 1894, to December, 1899, Cramer Crown, from January, 1900, to May, 1911, Seed G. E. 27, and since June, 1911, Hammer Special plates were generally used.

Substantially the same classification has been used in all the publications of the Henry Draper Memorial, except in the case of H.A. 28, Part 1. Slight changes have



photographed on the same plate, to prove that the difference was due to the star and not to the instrument, or condition of the air. Narrow lines will appear hazy, or even double, if the focus is poor, or the air unsteady, and a slit spectroscope is much to be preferred to an objective prism for determining this condition. Whenever the width of the lines appeared to be abnormal, it is noted in the Remarks. With the larger dispersion in H.A. 28 and 56, the deviation from the normal in the width of the lines was always noted, when certainly seen. When the lines are broad, the spectra are designated in H.A. 28, 1, by the letter "b," and in H.A. 28, 2, by Remark 18. When narrow, by the letter "c" and Remark 40, respectively. For convenience of reference, a list of bright stars in whose spectra the lines are narrow, was given in H.A. 56, 162.

Secondly, deviations may occur in the intensity of certain lines in stellar spectra. Numerous spectra in Classes A<sub>0</sub> to A<sub>5</sub>, show the double silicon line, 4128.1, 4131.1 to be of increased intensity, and in other spectra the strontium lines 4077.9, 4215.7 are very strong. Lists of a few of these peculiar spectra are given in H.A. 56, 113, 161. The great intensity of these strontium lines in spectra of various classes, such as  $\theta^1$  Microscopii of Class A<sub>2</sub>,  $\xi$  Phoenicis of Class F<sub>0</sub>, and  $\zeta$  Capricorni of Class G<sub>5</sub>, is of interest in connection with the relation of these lines to the absolute brightness of the stars, and to the possibility of distinguishing between the so-called "giants" and "dwarfs." Numerous other lines, including those of hydrogen, have also been found to be of abnormal intensity in certain spectra. In the case of C.D.M.  $-27^\circ 178$ , R. A.  $0^h 31^m.7$ , Dec.  $-27^\circ 50'$ , the continuous spectrum is Class G<sub>5</sub>, but the hydrogen lines are as strong as in Class F<sub>5</sub>. In some spectra of Class K<sub>5</sub>, or Ma, such as B.D.  $+50^\circ 1725$ , R. A.  $10^h 5^m.3$ , Dec.  $+49^\circ 58'$ , and C.D.M.  $-39^\circ 14192$ , R. A.  $21^h 11^m.5$ , Dec.  $-39^\circ 15'$ , several lines, including 4435 and 4455, are abnormally intense.

A third peculiarity in stellar spectra is the presence of bright, or emission, lines. At least 750 spectra are known to have bright lines. The gaseous nebulae, Class P, the Fifth Type, Class O, the P Cygni Type, and the Novae are discussed in H.A. 76, No. 3. The presence of bright lines in spectra of Class M, characteristic of long period variables, is indicated by the combination, Md. No symbol has ever been adopted to show the presence of bright lines in spectra of Class B, although the use of a suffix, such as " $\beta$ " or "h," has been suggested. It seemed best, however, to continue to designate these spectra by placing the letter "p" after the class, until some definite action should be taken by the Committee on Stellar Classification. These spectra may easily be found by means of the Remarks following Table I.

The other two deviations consist in a periodic doubling of the lines in the spectrum, also indicated by the letter "p," and in the existence of the lines of two

classes of spectra completely superposed, designated composite spectra. A large part of the bright stars having composite spectra are known to be double, either visually or spectroscopically. It is assumed that this is always the case, and two lines are accordingly given to such stars.

Miss Cannon has described the classification in full in H.A. 28, 146, and more concisely in H.A. 56, 66. A classification of the gaseous nebulae is given in H.A. 76, 20. For convenience, the classification as used in the present volume is again given below.

Class Pa. Typical nebula, I.C. 418, R. A.  $5^h 22^m.8$ , Dec.  $-12^\circ 46'$ . The double line, 3726, 3729, is more conspicuous than the chief nebular lines, 5007.0 and 4959.0. The hydrogen lines  $H\alpha$ ,  $H\beta$ ,  $H\gamma$ ,  $H\delta$ ,  $H\epsilon$ , and  $H\zeta$  are bright.

Class Pb. Typical nebula, The Great Nebula of Orion. Lines 5007.0 and 4959.0 are more intense than in Class Pa.

Class Pc. Typical nebula, I.C. 4997, R. A.  $20^h 15^m.6$ , Dec.  $+16^\circ 25'$ . Line 4363.4 is the most conspicuous. Novae usually show this line much stronger than 5007.0 when they first become nebulae.

Class Pd. Typical nebulae, N.G.C. 6826, R. A.  $19^h 42^m.1$ , Dec.  $+50^\circ 17'$ , and N.G.C. 6326, R. A.  $17^h 12^m.9$ , Dec.  $-51^\circ 40'$ . The chief nebular line, 5007.0, is the strongest line. The greater portion of the gaseous nebulae belong to this and the following class.

Class Pe. Typical nebulae, N.G.C. 7662, R. A.  $23^h 21^m.1$ ,  $+41^\circ 59'$ , and N.G.C. 7009, R. A.  $20^h 58^m.7$ , Dec.  $-11^\circ 46'$ . This class differs from Class Pd in having line 4685.9 present.

Class Pf. Typical nebula, N.G.C. 40, R. A.  $0^h 7^m.6$ , Dec.  $+71^\circ 32'$ . A bright band whose centre is at 4650 is the most conspicuous portion of this spectrum and appears to ally it with spectra of Class O.

Class Oa. Typical stars, B.D.  $+35^\circ 40'13$ , R. A.  $20^h 8^m.2$ , Dec.  $+35^\circ 54'$ , and C.P.D.  $-60^\circ 25'78$ , R. A.  $11^h 5^m.8$ , Dec.  $-60^\circ 26'$ . A broad bright band, whose centre is at 4650, is the most conspicuous portion of these spectra.  $H\gamma$  and  $H\delta$  are bright, and several other bright bands are seen.

Class Ob. Typical stars, B.D.  $+35^\circ 40'01$ , R. A.  $20^h 6^m.5$ , Dec.  $+35^\circ 53'$ , and C.D.M.  $-23^\circ 45'53$ , R. A.  $6^h 50^m.0$ , Dec.  $-23^\circ 48'$ . A wide, bright band, whose centre is at the wave length 4686, is the most characteristic feature of these spectra. The hydrogen lines  $H\beta$ ,  $H\gamma$ , and  $H\delta$  are bright, and also those of the  $\zeta$  Puppis series.

Class Oc. Typical stars, B.D.  $+36^\circ 39'87$ , R. A.  $20^h 13^m.3$ , Dec.  $+37^\circ 7'$  and C.D.M.  $-41^\circ 10'972$ , R. A.  $16^h 45^m.3$ , Dec.  $-41^\circ 41'$ . The bands are narrower than in

Classes Oa and Ob, and two well separated lines are seen at 4686 and 4638, the former being twice as bright as the latter. The hydrogen lines are bright, and also the lines of the  $\zeta$  Puppis series. No dark lines are seen.

Class Od. Typical stars,  $\zeta$  Puppis and  $\lambda$  Cephei. All lines are dark except 4686 and 4638, which are bright. Seven dark lines of the  $\zeta$  Puppis series have been photographed. The helium line, 4471.6, is present but very faint in  $\zeta$  Puppis. Several faint dark lines between  $H\beta$  and  $H\gamma$  are seen in the spectrum of  $\lambda$  Cephei, but not in that of  $\zeta$  Puppis.

Class Oe. Typical star, 29 Canis Majoris, R. A.  $7^h 14^m.5$ , Dec.  $-24^\circ 23'$ . The spectrum resembles that of  $\zeta$  Puppis in having all lines dark except 4686 and 4638. Numerous helium and other dark lines are present. Line 4097.5, sometimes attributed to silicon, and the silicon line, 4089.0 are at their maximum intensity.

Class Oe5. Typical star,  $\tau$  Canis Majoris, R. A.  $7^h 14^m.5$ , Dec.  $-24^\circ 47'$ . All the lines are dark. This spectrum is clearly intermediate between those of Classes Oe and Bo. It resembles those of Class Oe in the presence and intensity of the  $\zeta$  Puppis series, and those of Class Bo with respect to the helium lines. No bright bands are seen, but the strong dark lines 4649.3 and 4685.9 are present.

Class Bo. Typical star,  $\epsilon$  Orionis. The hydrogen lines are 0.3 as intense as in the spectrum of  $\alpha$  Canis Majoris. The  $\zeta$  Puppis series is present, but much fainter than in Class Oe5. Oxygen lines are strong. Line 4649.3 is slightly more intense than the helium lines 4026.3 and 4471.6, which are equally strong. The triplet, 4070.0, 4072.5, and 4076.1, is well marked. Lines 4649.3, 4116.3 and 4089.0, reach their greatest intensity in this class and decrease very rapidly in succeeding classes of spectra.

Class B1. Typical stars,  $\beta$  Canis Majoris and  $\beta$  Centauri. The hydrogen lines are seen from  $H\beta$  to  $H\tau$ . The  $\zeta$  Puppis series is not distinctly seen. The lines of helium are more intense while the silicon and oxygen lines are fainter than in Class Bo. Line 4471.6 exceeds 4649.3, while 4121.0 exceeds 4116.3, in intensity.

Class B2. Typical stars,  $\gamma$  Orionis and  $\alpha$  Lupi. The lines of helium are at their maximum intensity in this and the following class. Line 4116.3 is not seen, and lines 4089.0 and 4649.3 are faint.

Class B3. Typical stars,  $\pi^4$  Orionis and  $\alpha$  Pavonis. The hydrogen lines are about 0.5 as intense as in  $\alpha$  Canis Majoris. The helium lines, while not stronger than in Class B2, are more prominent, due to the disappearance or extreme faintness of the lines, 4070.0, 4072.5, 4076.1, 4089.0, 4116.3 and 4649.3. Helium lines having the greatest intensities are 3819.8, 4009.4, 4026.3, 4143.9, 4388.1, 4471.6, and 4922.1.



Class B5. Typical stars,  $\eta$  Tauri and  $\phi$  Velorum. These spectra show an advance towards Class A0 in the increased intensity of the calcium line, K, and of the double silicon line 4128.1, 4131.1, which is stronger than the helium line 4121.0, and fainter than 4143.9. Line 4481.3 is 0.7 as intense as 4471.6.

Class B8. Typical stars,  $\beta$  Persei and  $\gamma$  Gruis. The helium lines 4026.3 and 4471.6 are present, together with several lines prominent in the spectra of Class A0. Lines 4471.6 and 4481.3 are approximately equal. Line K is less intense than 4026.3.

Class B9. Typical stars,  $\lambda$  Aquilae and  $\lambda$  Centauri. The spectrum is nearly like that of Class A0, except that 4026.3 is seen and the line K is somewhat fainter than in Class A0.

Class A0. Typical star,  $\alpha$  Canis Majoris. The hydrogen lines are at their maximum intensity, and line K is 0.1 as intense as H $\delta$ , or less. On plates having sufficient dispersion, the calcium line H, at 3968.6, is separated from H $\epsilon$ , 3970.3, and is nearly as intense as line K. Line 4481.3 is the strongest except the hydrogen lines and line K. On a photograph taken with the 13-inch Boyden Telescope, with the dispersion of three prisms, 93 solar lines were measured.

Class A2. Typical stars,  $\delta$  Ursae Majoris and  $\iota$  Centauri. The line K is 0.3 or 0.5 as intense as H $\delta$ . Solar lines are well marked, especially lines 4481.3, 4226.9, and 4233.8. The two latter form a nearly equal pair. No helium lines are seen in this, or any following class.

Class A3. Typical stars,  $\alpha$  Piscis Austrini, and  $\tau^3$  Eridani. The line K is more than 0.5 as intense as the compound line H and H $\epsilon$ , and is 0.8 as intense as H $\delta$ . The metallic lines are more numerous and more intense than in Class A2, while the hydrogen lines are slightly fainter.

Class A5. Typical stars,  $\beta$  Trianguli and  $\alpha$  Pictoris. The line K is 0.9 as intense as the compound line H and H $\epsilon$ , and more intense than H $\delta$ . Line 4481.3 is no longer the most conspicuous among the solar lines. Lines 4299.4, 4300.7, and 4302.7 are well marked.

Class F0. Typical stars,  $\delta$  Geminorum and  $\alpha$  Carinae. The lines of hydrogen are about 0.5 as intense as in  $\alpha$  Canis Majoris. The line K is as strong as the compound line H and H $\epsilon$ , and about 3.0 as intense as H $\delta$ . The lines 4305.6, 4308.0, and 4309.5 and other lines which form the absorption band called G by Fraunhofer, are faint and inconspicuous.

Class F2. Typical star,  $\pi$  Sagittarii. This spectrum resembles Class F0, except that there is more appearance of continuity in the band G, due to increased strength of lines 4305.6 to 4315.2.

Class F5. Typical stars,  $\alpha$  Canis Minoris and  $\rho$  Puppis. The hydrogen lines are 2.0 as intense as in the Sun, and metallic lines are fainter and less numerous. Line 4325.9 is about 0.1 as strong as  $H\gamma$ . On plates with small dispersion, the Fraunhofer band G appears to be nearly continuous from 4299.4 to 4315.2. The compound line 4308.0 and 4309.5 is more intense than 4315.2. Line 4226.9 is well marked among the numerous lines, but is not 0.5 as strong as  $H\gamma$ .

Class F8. Typical stars,  $\beta$  Virginis and  $\alpha$  Fornacis. The spectrum resembles that of the Sun, except that the hydrogen lines are stronger, and a few of the metallic lines are fainter.

Class G0. Typical stars,  $\alpha$  Aurigae and  $\beta$  Hydri. The spectrum closely resembles that of the Sun. The hydrogen lines are no longer conspicuous as a series of lines.  $H\gamma$  is 1.5 as intense as 4325.9, and 3.0 as intense as the adjacent line, 4337.7, when the dispersion is sufficient to show the two lines separately. The lines 4076.8 to 4077.9,  $H\delta$ , and 4226.9 are nearly equal in intensity. The band G is continuous on photographs taken with one or two prisms. The continuous spectrum shows no very marked changes in the distribution of light, from  $H\beta$  to  $H\epsilon$ , although there is a slight gradual decrease from  $H\gamma$  to  $H\epsilon$ . The bands H and K are very conspicuous.

Class G5. Typical stars,  $\kappa$  Geminorum and  $\alpha$  Reticuli. The hydrogen lines are slightly fainter than in Class G0.  $H\gamma$  when combined with 4337.7 is equal to 4325.9; when separated,  $H\gamma$  is fainter than 4325.9. Several spaces appear brighter than adjacent portions, and in the distribution of light there is a decided advance towards Class K0.

Class K0. Typical stars,  $\alpha$  Bootis and  $\alpha$  Phoenicis. The hydrogen lines are fainter than in Class G5 and the light of the continuous spectrum shows a decided decrease from  $H\gamma$  to  $H\epsilon$ .  $H\gamma$  is about 0.5 as strong as 4325.9. Line 4226.9 is 3.0 as intense as in Class G0. Bands H and K reach their greatest intensity. Line 4226.9 is 2.0 as intense as the compound line 4172 and nearly 3.0 as intense as lines 4383 to 4385. The band G, extending from 4299 to 4315 is continuous and is more conspicuous than line 4226.9. Several portions appear brighter than adjacent parts, such as from 4077.9 to  $H\delta$ , 4215.7 to 4226.9, 4470 to 4525 and 4614 to 4648, approximately.

Class K2. Typical stars,  $\beta$  Cancri and  $\nu$  Librae. The spectrum resembles Class K5 in the increased intensities of several lines, as 4226.9, and a general faintness of the continuous portion towards the end of shorter wave length. The band G is still continuous.

Class K5. Typical star,  $\alpha$  Tauri. The bands H and K and line 4226.9 are the most conspicuous absorption lines. The band G is no longer continuous, owing to

the disappearance of several of the fainter lines. The double lines 4383 to 4385 and 4405 to 4408, form a conspicuous pair, of which the one of shorter wave length is somewhat stronger. Faint breaks in the light are seen at the wave lengths 4762, 4954, and 5168, which are the beginning of the absorption bands of Class M. There is also a sudden diminution in light at  $H\beta$ , which is nearly as well marked as the similar change at 4762.

Class Ma. Typical stars,  $\alpha$  Orionis and  $\gamma$  Hydri. The spectrum is banded. The bands extending from 4762 to 4954 and from 5168 to 5445 are well marked. The change in light at  $H\beta$  is much less conspicuous than at 4762. Several bright spaces are seen, such as from 4556 to 4586, and from 4657 to 4668. The lines of the G band are well separated, and line 4315.2 is very faint. Line 4226.9 is the most conspicuous absorption line. The spectrum is faint towards the end of greater wave length, so that bands H and K are generally barely seen.

Class Mb. Typical stars,  $\rho$  Persei and  $\gamma$  Gruis. The edges of the absorption bands, at wave lengths 4762, 4954, 5168, and 5445 are strong and appear somewhat like bright bands. These bands fade gradually towards the edge of shorter wave length. Line 4226.9 is very wide and sometimes appears to be as intense as  $H\delta$  in the spectrum of  $\alpha$  Canis Majoris. Conspicuous bright bands of equal intensity are seen from 4556 to 4586 and from 4614 to 4626. Lines 4299.4, 4300.7, and the compound line 4305.6, 4308.0 and 4309.5 are the only well marked lines remaining of the band G. On isochromatic plates, absorption bands are also seen having edges at the wave lengths 5763, 5816, and 5857, approximately.

Class Mc. Typical stars, W Cygni and RX Aquarii. The continuous spectrum is fainter, and the bright edged bands are stronger, than in Classes Ma and Mb, so that the spectrum appears to be of a fluted character, and on plates of small dispersion many of the dark lines seem to have disappeared.

Class Md. Typical stars,  $\chi$  Cygni and o Ceti. This designation is used for spectra of any division of Class M, in which at least one hydrogen line is bright. The greater portion of the variable stars of long period have this class of spectrum. The spectra differ widely. Either  $H\beta$ ,  $H\gamma$ , or  $H\delta$  may be the strongest bright line, while the underlying spectrum may belong to Class Ma, Mb, or Mc. The subject is further complicated by changes in the relative intensity of the hydrogen lines and probably in the class of spectrum, connected with the variation in the light of the star. As an example, the spectrum of 154615, R Serpentis, may be cited. On April 25, 1912, the bright line,  $H\delta$ , was seven times as intense as  $H\gamma$ , while on April 18, 1914, the two lines were of nearly the same intensity. On the first date, the star was of the ninth magnitude, and the phase was 40 days before maximum. On the

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second date, the star was at maximum light, about the sixth magnitude. It is evident that no accurate subdivision of these spectra can be made until observations have been obtained at different points on the light curve. It has therefore seemed best to use the designation Md without numeral, in Table I, and to give additional facts, such as the intensities of the bright hydrogen lines, assuming  $H\gamma$  to be equal to 10, in the Remarks. Several spectra which have hitherto been called Md1 or Md2, in which  $H\beta$  is the strongest bright line, are found to be peculiar and are designated Pec. in Table I. The variable stars R Andromedae, U Cassiopeiae, S Cassiopeiae, R Lyncis, R Canis Minoris, T Geminorum, and R Cygni may be given as examples. These spectra do not show the titanium bands having bright edges at 4762, 4954, and 5168 as in all divisions of Class M, but more nearly resemble the spectrum of  $\pi^1$  Gruis, which may be placed in a subdivision of Class R, assuming some peculiarities.

Class R. This letter was assigned in 1908, to a few spectra which on photographs of small dispersion, resemble those of Class N between  $H\beta$  and  $H\gamma$ , but which contain so much blue light that the spectrum is visible as far as the calcium bands, H and K. A list of spectra assigned at that time to Class R is given in H. C. 145. A careful study of these spectra shows that they may be subdivided into at least three classes, which are described below.

Class Ro. Typical star, S.D.  $-10^\circ 5057$ , ptm. magn. 7.04, R. A.  $19^h 17^m.6$ , Dec.  $-10^\circ 54'$ . The distribution of light resembles that in Class G5 or Ko, and the absorption bands H and K, are well seen. The dark carbon band at 4700 is wide and strong, and the dark band 4395 is about equal to Fraunhofer's G band. Lines 4226.9, 4233.8, 4236.1, and 4239.0 are well marked, and on photographs having small dispersion the appearance at this region is that of a wide, continuous band of absorption. Some spectra have been found during observations for this catalogue, which may be considered to be intermediate between the spectra of Classes K and Ro. One of the best examples is the spectrum of the star S.D.  $-19^\circ 3634$ , ptm. magn. 8.7, R. A.  $13^h 1^m.1$ , Dec.  $-19^\circ 31'$ . This spectrum contains the wide band of absorption near 4227 as in Class Ro, and a fainter band at 4700. Other peculiar spectra of Class K show the same bands in more or less marked degree, as stated in the Remarks.

Class R3. Typical star, B.D.  $+5^\circ 5223$ , ptm. magn. 8.8, R. A.  $23^h 44^m.0$ , Dec.  $+5^\circ 50'$ . The H and K bands of calcium are visible, but they are fainter than in Class Ro, and the continuous spectrum between these bands and  $H\gamma$  is not more than 0.5 as intense as in Class Ro.

Class R5. Typical star, S.D.  $-3^\circ 1685$ , ptm. magn. 7.5, R. A.  $6^h 56^m.1$ , Dec.  $-3^\circ 6'$ . In the region of shorter wave length than 4240, the continuous spectrum is barely

visible on plates of normal exposure. When the dispersion is small, the spectrum appears to consist of three wide bright bands, whose centres are at the approximate wave lengths, 4300, 4400, 4840, and whose intensities are estimated to be 3, 6 and 10, respectively.

Class R8. Typical star, B.D.  $+61^{\circ} 667$ , ptm. magn. 7.92, R. A.  $3^{\text{h}} 57^{\text{m}}.2$ , Dec.  $+61^{\circ} 31'$ . The spectrum is very faint from 4240 to the violet, so that on photographs of long dispersion, it is difficult to distinguish between this Class and Class Na.

Class Na. Typical star, 19 Piscium, B.D.  $+2^{\circ} 4709$ , var., R. A.  $23^{\text{h}} 41^{\text{m}}.3$ , Dec.  $+2^{\circ} 56'$ . The spectrum is visible as far towards the violet as the bands H and K, but the portion between 4240 and K is even fainter than in Class R8. When the dispersion is short, the dark band 4700 separates the spectrum into two wide bright bands, the portion from 4400 to 4700 being estimated as 0.8 as intense as that from 4700 to 5100. According to this estimate of the distribution of light, spectra of this class may be designated 0, 8, 10, when compared with those of Class R5, in which the bands were estimated as 3, 6, 10.

Class Nb. Typical star, B.D.  $+67^{\circ} 350$ , ptm. magn. 7.39, R. A.  $4^{\text{h}} 40^{\text{m}}.8$ , Dec.  $+67^{\circ} 59'$ . This spectrum may be designated 0, 6, 10, when the distribution of light is considered. The bright portion from 4400 to 4700 is now only 0.6 as intense as the portion of greater wave length than 4700.

The spectra of some very red stars have recently been obtained with the 24-inch Reflector, using plates stained with pinacyanol or dicyanin. Some examples are the spectra of the variable stars, VX Andromedae, and S Cephei, and also of the stars R. A.  $6^{\text{h}} 33^{\text{m}}.3$ , Dec.  $+22^{\circ} 42'$ , and  $+49^{\circ} 3673$ , R. A.  $21^{\text{h}} 51^{\text{m}}.5$ , Dec.  $+50^{\circ} 1'$ . These spectra show no light of shorter wave length than  $H\beta$ , and probably form later subdivisions of Class N, but it seems wiser to wait until a larger amount of material has been collected, before assigning definite letters to these very peculiar spectra. In the meantime, the facts so far observed are given in the Remarks.

Pec. All spectra which can not be assigned to any known class, considering their principal characteristics. This includes the spectra of Novae, a few variables, very red stars, and some others.

Con. Spectra apparently continuous. This includes the spectra of nebulae without bright lines, or of clusters which resemble such nebulae with the dispersion employed. As these objects appear as surfaces, and objective prisms are used, dark lines would not be visible. Neb. or Cl. is then given in the magnitude column according to the description of the object in H.A. 60, 8.

Table I contains 24,428 stars, between  $7^{\text{h}} 00^{\text{m}}.0$  and  $9^{\text{h}} 00^{\text{m}}.0$ , whose spectra have been classified. A description of each column of the table is given below, preceded by its heading.

H.D. A number for reference, to be added to the number in heavy type at the top of the first column. It is recommended that these numbers be preceded by the letters H.D., indicating the Henry Draper Catalogue, when reference is made to their designations in this catalogue. Thus, the first star on page 17 may be referred to as H.D. 53,501. This notation also conforms to the designations H.A., H.B., and H.C., which are already in use to denote the Harvard Annals, Bulletins, and Circulars, respectively. In like manner, H.N., H.P., H.R., H.S., and H.V. are used to designate the Harvard Nebulae, Photometry, Revised Photometry, Standard Regions, and Variables, respectively.

DM. The number of the star in the Zone of the Bonn Durchmusterung, when its position for 1855 was north of declination  $-23^{\circ}$ . For stars south of this limit, and whose declination in 1875 was north of  $-52^{\circ}$ , the Cordoba Durchmusterung, and for stars south of  $-52^{\circ}$ , the Cape Photographic Durchmusterung, was used. The number of the zone is generally the same as the degree of declination given in the fourth column. When they differ, owing to precession, the number is placed in *Italics*. The number of the nearest zone is then to be substituted. For stars between  $6^h$  and  $18^h$  of right ascension, the nearest zone is always the northern, for other stars, the southern.

Nearly twelve hundred of these stars are not contained in the Bonn, Cordoba, or Cape Durchmusterungs. They are indicated by the absence of a number in the second column. The spectra of these stars were generally classified from plates taken with the 16-inch Metcalf Telescope.

R. A. 1900. The minutes and tenths of the right ascension for 1900. The right ascension of the first star is given in heavy face figures at the top of the table to the right. These positions are only approximate. Owing to the large number of stars in the Catalogue, they will fall into groups, each containing a number of stars whose right ascension is the same in this table. They are then arranged in the order of declination, the northern star being placed first. It may accordingly happen that, when two stars are near together, the preceding one, as shown by its number in the Durchmusterung, may here follow the other.

Dec. 1900. The declination for 1900, expressed in degrees and minutes.

Ptm. The photometric magnitude. This is taken from H.A. 50 or 54, for stars contained in those works, and is given to hundredths of a magnitude. For other stars, which are north of  $-62^{\circ}$ , the magnitude in the Bonn or Cordoba Durchmusterung is used after reducing it to the photometric scale by means of the tables, given in H.A. 72, 214, 245, and H.A. 80, 132. The magnitudes are then given only to tenths. The magnitudes of stars south of  $-62^{\circ}$ , and which are, therefore, not

contained in the Cordoba Durchmusterung, are also given only to tenths, and are derived from the photographic magnitudes given in the next column, by subtracting the color index depending on the class of spectrum. The color index is taken from H.A. 80, 151, and has the values for B<sub>0</sub>, -0.24; B<sub>1</sub>, -0.22; B<sub>2</sub>, -0.19; B<sub>3</sub>, -0.17; B<sub>5</sub>, -0.12; B<sub>8</sub>, -0.05; B<sub>9</sub>, -0.02; A<sub>0</sub>, 0.00; A<sub>2</sub>, +0.06; A<sub>3</sub>, +0.08; A<sub>5</sub>, +0.14; F<sub>0</sub>, +0.28; F<sub>2</sub>, +0.34; F<sub>5</sub>, +0.42; F<sub>8</sub>, +0.50; G<sub>0</sub>, +0.56; G<sub>5</sub>, +0.78; K<sub>0</sub>, +1.00; K<sub>2</sub>, +1.07; K<sub>5</sub>, +1.18; M, +1.35.

Ptg. The Photographic Magnitude. For stars north of declination  $-19^{\circ}$ , in 1875, the magnitudes are derived from the photometric magnitudes, contained in the preceding column, by adding the correction for the class of spectrum given above. For stars south of  $-19^{\circ}$ , the magnitude is taken from the Cape Durchmusterung, first reducing it to the standard scale as described in H.A. 80, 256. It will be noticed that when either the photometric or photographic magnitudes are derived by means of the color index, they are placed in Italics. In the first case, the color index is subtracted, in the second, added. This method is unsatisfactory from its indirectness, but no direct measures are known to exist.

Sp. The Class of Spectrum. A description of the adopted classification will be found on page 5.

Int. The photographic intensity of the spectrum as estimated by Miss Cannon when she observed it. The faintest spectra which could be classified with certainty were estimated as 1, the densest as 10. When a spectrum was too dense to be classified, it was looked for on a plate showing less faint stars. This might be due to a greater dispersion, a larger load on the pendulum of the control clock, a hazy night, or a slower emulsion.

Rem. Remarks are here indicated which furnish much additional information. The letter R refers to additional facts regarding the star, to be found in the Remarks following Table I. When two figures are given they show that the spectrum was classified on another plate. The first figure indicates, in tenths of the interval between two classes, how much the second classification differs from the first. Thus, if the class in column Sp. was F<sub>0</sub>, and the spectrum was again estimated F<sub>0</sub>, the first figure would be 0; if the second classification was F<sub>5</sub>, it would be 5 and if A<sub>5</sub>, it would be 5. The average value of the differences of the first 100 of these is  $\pm 0.13$ . A comparison of the classification of spectra taken at the Yerkes, Lick, Allegheny, and Mt. Wilson Observatories with those made here is contained in H.A. 56, 263, and gives the average difference  $\pm 0.14$ . When the residual was greater than 5, an estimate on a third plate was made, if practicable. If not, the spectra were re-examined. In case one observation appeared to be wrong, it was rejected,

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and the facts are given in the Remarks. The second figure indicates the intensity on the second plate. If the spectrum was estimated on a third plate, a hyphen is inserted, and the estimates will be published later. When the estimates of the class differ, the most reliable one is given in Column Sp. The intensities serve to decide which is most likely to be correct; the order of precedence being 6, 5, 7, 4, 8, 3, 2, 9, 10, 1. When the column is not wide enough for a complete remark, it is given in full in the remarks following Table I.

Pl. No. The number of the plate in its series. The letter b indicates that the instrument used was the 8-inch Bache Telescope; the letter c, the 11-inch Draper Telescope; i, the 8-inch Draper Telescope; m, the 16-inch Metcalf Telescope. When the spectrum was taken from H.A. 28, 56, or 76, the volume and page are given and when derived from an unpublished manuscript, the letter M is inserted, instead of the plate number.

Table I is followed by a series of Remarks which give much additional information regarding the individual stars. They include the Bayer designation, additional information regarding the spectrum when it is peculiar, and the position and magnitude of adjacent stars when it is probable that they affect the spectrum. When the stars differ only in declination the spectra are superposed, while equal differences in right ascension are shown at the edges of the spectra. In the case of variable stars, the designation by letter and constellation, and the class are given. Novae are designated by I, long period variables by II, irregular variables by III, short period variables by IV, and Algol variables by V. The magnitude at maximum and minimum, and the period are also given. Parallaxes of  $0''.1$ , or more, are inserted from Walkey's Parallaxes of 625 stars. B. A. A. 27, App. Proper motions of  $1''$ , or more, are inserted from the list given by van Maanen in A. P. J. 41, 187.

As an example of the facts that can be derived from Table I, it appears that the first star on page 17, H. D. 53,501, is C. P. D.  $-67^{\circ}686$ , R. A.  $7^h 0^m.1$ , Dec.  $-67^{\circ}47'$  (1900). Its magnitude on the photometric scale is 5.08, and is taken from H. A. 50, 71. Its photographic magnitude is 6.6, found by reducing the magnitude, 6.8 in the Cape Photographic Durchmusterung, to the standard scale as described in H.A. 80, 256. The intensity is 7. The observation was made on B 9003, taken with the 8-inch Bache Telescope. It is proposed to give the date, length of exposure, and other facts relating to each plate in H.A. 90.

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TABLE I.

THE HENRY DRAPER CATALOGUE.

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

53400

6<sup>h</sup> 59<sup>m</sup>.8

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	3584	59.8	-27 55	10.9	9.8	Ao	1	..	24433b	51	1791	0.0	+ 0 29	7.9	8.9	Ko	4	..	37652i
2	3451	59.8	-33 26	7.97	8.9	K5	4	..	2067ob	52	1806	0.0	- 4 24	9.1	9.2	A2	2	..	38609i
3	3298	59.8	-34 36	8.0	8.5	Ao	7	..	20534b	53	1954	0.0	- 5 38	9.1	9.1	Ao	4	R	44407b
4	3310	59.8	-35 10	8.60	9.1	Ko	3	..	20534b	54	1955	0.0	- 5 52	9.1	9.1	Ao	1	..	38609i
5	2877	59.8	-40 13	7.50	7.8	A3	7	..	20671b	55	1773	0.0	-11 6	8.9	9.9	Ko	4	..	24340b
6	2572	59.8	-49 55	8.28	9.6	Ko	4	..	38414b	56	1770	0.0	-11 23	7.8	7.7	B5	2	..	8909b
7	750	59.8	-60 38	8.9	9.4	F2	3	..	15176b	57	1771	0.0	-11 50	9.1	9.1	B9	3	..	24340b
8	1029	59.9	+60 26	8.9	9.0	A2	4	..	37526i	58	1772	0.0	-11 59	8.4	8.9	F8	7	..	24340b
9	1180	59.9	+56 1	7.8	8.1	Fo	6	..	37526i	59	3985	0.0	-25 32	9.5	8.9	Go	5	..	24433b
10	1388	59.9	+45 33	8.6	8.9	Fo	3	..	3750ri	60	3986	0.0	-25 39	var.	var.	K2	2	R	24433b
11	1591	59.9	+41 27	8.0	8.5	F8	2	..	3750ri	61	3589	0.0	-27 21	8.9	7.8	B8	8	..	24433b
12	1791	59.9	+40 21	9.0	9.1	A3	2	E	3750ri	62	3789	0.0	-28 20	10.4	9.5	Ao	2	..	24433b
13	1470	59.9	+33 29	10.0	11.0	Ko	2	..	37447i	63	3858	0.0	-30 35	8.3	8.6	F2	2	..	18926b
14	1310	59.9	+28 21	7.8	7.9	A2	5	0.3	37478i	64	3264	0.0	-37 3	10.1	9.7	Go	1	..	20534b
15	1382	59.9	+16 24	9.6	10.6	Ko	2	..	4413m	65	3120	0.0	-38 8	10.6	10.2	F5	2	..	2067ob
16	1558	59.9	+14 37	6.78	6.73	B8	8	1.10	36977i	66	1224	0.0	-56 28	8.0	8.3	Fo	6	..	13007b
17	1559	59.9	+14 5	10.3	10.8	F8	1	..	4413m	67	510	0.0	-71 56	9.0	9.1	A3	4	..	15168b
18	1547	59.9	+13 51	7.4	8.8	Ma	6	0.2 R	4413m	68	236	0.0	-79 49	10.0	11.2	K5	1	..	20652b
19	1546	59.9	+13 28	8.4	9.4	Ko	5	..	4413m	69	484	0.1	+66 7	8.4	9.4	Ko	1	..	38155i
20	1404	59.9	+10 42	8.7	10.1	Ma	..	..	M	70	1552	0.1	+35 49	9.0	9.0	Ao	2	..	37447i
21	1588	59.9	+ 7 21	8.7	8.7	B9	2	..	37652i	71	1471	0.1	+33 12	9.5	9.6	A5	2	..	37447i
22	1536	59.9	+ 3 7	8.9	9.0	A5	1	..	37652i	72	1571	0.1	+25 1	7.16	8.23	K2	4	..	38238i
23	1537	59.9	+ 2 49	9.1	9.5	F5	2	..	39867b	73	1600	0.1	+19 54	9.05	9.05	Ao	2	..	38238i
24	1677	59.9	+ 1 33	8.7	9.3	Go	3	5.3	20867b	74	..	0.1	+16 37	..	..	A	1	..	4413m
25	1535	59.9	- 1 38	8.9	9.0	A2	3	..	20867b	75	1383	0.1	+16 25	10.4	10.7	F2	1	..	4413m
26	1720	59.9	- 3 47	9.6	9.6	Ao	1	..	44407b	76	1458	0.1	+15 10	9.2	10.2	Ko	2	..	4413m
27	1919	59.9	- 6 18	9.6	9.7	A2	2	..	44407b	77	1640	0.1	+ 8 55	8.7	8.7	Ao	3	..	37652i
28	1729	59.9	- 8 42	7.9	7.7	B2	4	..	44407b	78	1530	0.1	+ 5 27	8.7	8.7	Ao	2	..	37652i
29	1827	59.9	-10 1	8.76	9.10	F2	2	..	24340b	79	1540	0.1	+ 2 24	8.5	8.5	B9	2	..	37652i
30	1661	59.9	-18 31	10.5	10.5	Ao	1	..	15402b	80	1679	0.1	+ 1 27	10.0	10.0	Ao	2	..	39867b
31	1672	59.9	-19 6	8.5	9.0	Ko	2	..	12631b	81	1582	0.1	- 0 43	7.6	8.0	F5	5	..	37700i
32	1670	59.9	-19 24	8.9	8.9	Go	2	..	12631b	82	1956	0.1	- 5 38	9.0	9.1	A2	4	..	44407b
33	1727	59.9	-21 8	7.32	7.7	Ao	7	..	12631b	83	1723	0.1	- 7 29	9.2	9.2	B9	2	..	44407b
34	1728	59.9	-21 17	8.1	8.0	A2	6	..	12631b	84	1730	0.1	- 8 8	9.0	10.2	K5	1	..	44407b
35	3983	59.9	-25 58	10.9	9.8	Ko	2	..	24433b	85	1850	0.1	-10 22	9.1	10.3	K5	1	..	24340b
36	3799	59.9	-26 37	8.5	9.2	Ko	4	..	24433b	86	1806	0.1	-13 48	8.9	8.9	B8	6	..	24340b
37	3800	59.9	-26 52	8.7	8.4	Ao	7	..	24433b	87	1760	0.1	-17 16	8.3	8.3	B8	6	..	15402b
38	3840	59.9	-29 14	8.7	8.6	Ao	5	..	24433b	88	1664	0.1	-18 5	9.1	10.1	Ko	2	..	15402b
39	3856	59.9	-30 20	8.21	8.6	Ko	2	..	18926b	89	1665	0.1	-18 26	9.7	9.8	A2	2	..	15402b
40	3616	59.9	-32 50	7.6	8.3	F5	3	..	18926b	90	1683	0.1	-22 36	9.1	9.2	Ko	2	..	12631b
41	3119	59.9	-38 29	11.4	10.5	A	1	..	2067ob	91	4824	0.1	-23 5	10.2	9.2	Go	2	..	12631b
42	2896	59.9	-45 36	8.5	8.0	Ao	9	..	20858b	92	3803	0.1	-26 9	10.7	9.7	Ao	2	..	24433b
43	2764	59.9	-47 11	9.8	10.0	F8	2	..	38414b	93	3304	0.1	-34 44	9.9	10.3	K2	2	..	2067ob
44	1226	59.9	-53 55	8.1	8.6	G5	3	..	10697b	94	2577	0.1	-49 47	7.08	6.8	A2	7	3.3	9026b
45	405	0.0	+69 3	8.4	9.4	Ko	2	..	38155i	95	2533	0.1	-50 43	9.8	10.8	Ko	1	..	38414b
46	1392	0.0	+50 27	8.6	8.7	A2	3	..	37515i	96	2245	0.1	-51 19	9.8	9.7	G	2	..	38414b
47	1582	0.0	+44 36	9.5	10.6	K2	1	..	3750ri	97	1227	0.1	-53 34	9.2	9.2	Ao	2	..	10697b
48	1658	0.0	+42 7	8.4	8.8	F5	6	..	3750ri	98	752	0.1	-59 17	8.3	9.2	K2	1	..	18486b
49	..	0.0	+15 8	..	..	A	1	..	4413m	99	752	0.1	-60 37	9.2	9.8	G	1	..	15176b
50	1678	0.0	+ 1 42	9.4	9.4	Ao	2	0.2	20867b	100	685	0.1	-65 46	9.0	9.6	Go	5	..	15223b

## THE HENRY DRAPER CATALOGUE.

53500

7<sup>h</sup> 0<sup>m</sup>.1

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H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	686	m. 0.1	• -67 47	5.08	6.6	K2	7	..	9003b	51	2767	m. 0.3	• -41 59	10.8	10.2	Ao	1	..	20671b
2	619	0.2	+64 12	9.7	10.1	F5	2	..	37545i	52	2894	0.3	-43 20	9.6	10.3	G5	1	..	20671b
3	1478	0.2	+47 56	8.2	8.3	A2	4	0,3	37501i	53	2676	0.3	-48 43	9.4	9.9	Ko	2	..	38414b
4	1687	0.2	+38 3	8.4	9.4	Ko	3	..	37447i	54	1229	0.3	-53 24	9.8	9.8	A	1	..	10697b
5	1473	0.2	+32 57	8.1	8.7	Go	2	..	37527i	55	1172	0.3	-55 0	8.77	9.5	G5	3	..	13007b
6	1601	0.2	+19 12	8.5	9.3	G5	1	..	38238i	56	546	0.3	-72 23	9.4	9.7	Fo	2	..	15168b
7	1459	0.2	+15 4	8.74	9.74	Ko	4	..	4413m	57	1108	0.4	+54 17	8.6	9.0	F5	5	..	37526i
8	1548	0.2	+13 51	9.7	10.7	Ko	1	..	4413m	58	1171	0.4	+52 50	8.6	9.0	F5	1	..	37515i
9	1409	0.2	+10 32	8.1	9.1	Ko	1	..	36977i	59	1793	0.4	+40 56	9.0	10.4	Mb	..	..	M
10	1510	0.2	+9 18	6.02	7.02	Ko	7	..	37652i	60	1478	0.4	+32 36	8.4	8.8	F5	2	..	37447i
11	1539	0.2	+3 51	8.8	8.9	A3	3	..	37652i	61	1560	0.4	+14 8	7.4	8.6	K5	7	3,2	4413m
12	1680	0.2	+1 3	8.39	8.39	Ao	5	1,2	39867b	62	1417	0.4	+12 56	10.0	10.0	Ao	3	..	4413m
13	1957	0.2	-5 30	9.1	9.2	A5	3	..	44407b	63	1643	0.4	+8 17	9.4	9.5	A2	2	..	15139b
14	1732	0.2	-8 18	9.1	9.1	B9	2	..	44407b	64	1512	0.4	+6 0	9.4	9.4	Ao	2	..	15139b
15	1774	0.2	-11 46	9.3	9.3	Ao	4	..	24340b	65	1532	0.4	+5 46	8.7	9.5	G5	1	..	37652i
16	1704	0.2	-14 25	8.9	9.5	Go	2	0,2 R	46170b	66	1579	0.4	+4 6	7.7	8.2	F8	5	..	37652i
17	1731	0.2	-21 36	10.2	9.3	A2	2	..	12631b	67	1917	0.4	-2 11	10.0	10.0	A	1	..	20867b
18	3807	0.2	-26 47	9.7	9.7	Ko	3	..	24433b	68	1722	0.4	-3 11	9.5	9.5	B8	2	..	20867b
19	3591	0.2	-27 10	10.7	9.7	Ao	2	..	24433b	69	1854	0.4	-10 42	10.0	10.0	A	2	..	24340b
20	3592	0.2	-27 49	10.2	10.1	K	1	..	24433b	70	1777	0.4	-11 49	9.7	10.3	Go	2	..	24340b
21	3791	0.2	-28 12	11.2	10.0	Ao	1	..	24433b	71	1807	0.4	-14 2	9.2	9.8	Go	2	..	46170b
22	3044	0.2	-39 49	7.98	8.7	G5	5	..	20671b	72	1636	0.4	-15 15	8.9	10.0	K2	2	..	15402b
23	2882	0.2	-40 58	8.9	9.6	G5	3	..	20671b	73	1744	0.4	-16 54	9.1	9.1	Ao	3	..	15402b
24	3102	0.2	-44 52	9.14	9.4	Fo	2	..	20858b	74	1761	0.4	-17 38	8.5	9.3	G5	2	..	15402b
25	1132	0.2	-55 17	8.5	9.2	Ko	4	..	13007b	75	1667	0.4	-19 0	8.6	8.9	Fo	5	..	12631b
26	1110	0.2	-57 10	7.1	7.6	F2	8	..	13007b	76	3991	0.4	-25 36	10.2	9.7	Ao	3	..	24433b
27	1111	0.2	-57 27	8.1	8.9	G5	3	..	13007b	77	3596	0.4	-27 3	11.2	9.8	Ao	2	..	24433b
28	485	0.3	+66 25	9.2	9.5	Fo	2	..	38155i	78	3595	0.4	-27 23	10.4	9.2	A3	3	..	24433b
29	690	0.3	+63 2	8.5	8.6	A5	4	..	37545i	79	3461	0.4	-33 40	8.9	10.3	Ko	2	..	20670b
30	1593	0.3	+49 38	9.0	9.1	A2	1	..	37515i	80	2888	0.4	-40 51	10.1	9.7	Ao	2	..	20671b
31	1472	0.3	+33 54	8.0	8.3	Fo	4	..	37527i	81	2896	0.4	-43 27	9.6	10.0	G5	2	..	20671b
32	1569	0.3	+22 50	8.10	8.66	Go	2	..	38238i	82	2767	0.4	-47 22	9.6	10.3	F8	2	..	38414b
33	1705	0.3	+20 14	8.6	9.6	Ko	1	..	38238i	83	511	0.4	-71 7	8.9	9.7	G5	2	..	15168b
34	1384	0.3	+16 10	10.4	10.8	F5	1	..	4413m	84	547	0.4	-72 53	9.4	9.9	F8	2	..	20652b
35	1460	0.3	+15 55	9.7	10.7	Ko	2	..	4413m	85	1659	0.5	+42 52	9.2	9.5	F2	2	..	37501i
36	1461	0.3	+15 20	7.06	8.06	Ko	5	0,9	36977i	86	1553	0.5	+35 42	10.2	10.2	Ao	1	..	37447i
37	1549	0.3	+13 22	10.0	10.0	A	4	..	4413m	87	1570	0.5	+22 19	9.0	9.4	F5	2	..	38238i
38	1439	0.3	+11 22	7.7	7.7	Ao	5	..	36977i	88	1492	0.5	+17 54	7.12	7.10	B9	6	..	36977i
39	1511	0.3	+9 31	9.2	9.2	Ao	3	..	15139b	89	1682	0.5	+1 55	8.8	8.8	B9	2	..	37652i
40	1642	0.3	+8 0	7.8	8.8	Ko	3	..	37652i	90	1587	0.5	-0 38	7.6	8.6	Ko	5	0,7	37700i
41	1592	0.3	+7 51	8.8	9.8	Ko	2	..	15139b	91	1541	0.5	-2 4	9.02	9.44	F5	2	..	20867b
42	1539	0.3	-1 25	8.7	8.7	Ao	3	..	20867b	92	1921	0.5	-7 4	9.2	9.2	Ao	3	..	44407b
43	1726	0.3	-7 33	9.1	9.1	B9	4	..	44407b	93	1728	0.5	-7 8	9.1	10.1	Ko	1	..	44407b
44	1767	0.3	-13 0	9.1	10.3	K5	1	..	46170b	94	1832	0.5	-9 57	8.56	9.56	Ko	2	..	24340b
45	1743	0.3	-16 8	7.9	8.3	F5	5	..	15402b	95	1856	0.5	-10 57	9.2	9.2	B8	5	..	24340b
46	3793	0.3	-28 57	8.5	9.2	Ko	4	..	24433b	96	1808	0.5	-13 50	7.9	9.1	K5	4	0,3	24340b
47	3981	0.3	-31 39	9.3	8.9	B9	2	..	18926b	97	1745	0.5	-16 25	9.2	9.2	Ao	3	..	15402b
48	3306	0.3	-34 7	7.86	9.1	Ko	4	..	20534b	98	1706	0.5	-20 41	7.20	8.6	K2	4	..	12631b
49	2885	0.3	-40 18	9.3	9.3	A3	4	..	20671b	99	1705	0.5	-21 4	9.5	9.5	F5	2	..	12631b
50	2768	0.3	-41 20	8.7	9.1	A5	4	..	20671b	100	3597	0.5	-28 1	10.0	9.2	Ao	3	..	24433b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

53600

7<sup>h</sup> 0<sup>m</sup>.5

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	3796	0.5	-28 45	8.3	8.9	Go	5	..	24433b	51	1748	0.7	-16 40	9.7	10.1	F5	2	..	15402b
2	3870	0.5	-30 38	7.64	7.7	B9	8	..	18926b	52	1766	0.7	-17 28	9.0	9.0	Ao	3	..	15402b
3	3322	0.5	-36 0	9.9	9.7	Ko	2	..	20534b	53	1676	0.7	-19 49	9.1	8.9	A3	3	..	12631b
4	3330	0.5	-36 14	10.1	10.3	Ko	1	..	20670b	54	3817	0.7	-27 0	9.5	8.9	B9	5	..	24433b
5	2770	0.5	-41 16	10.6	9.6	F5	3	..	20671b	55	3600	0.7	-27 21	9.3	9.0	Go	4	..	24433b
6	2680	0.5	-49 0	9.8	9.7	F2	3	..	38414b	56	3988	0.7	-31 49	9.3	8.6	Ao	3	..	18926b
7	755	0.5	-62 35	9.7	9.7	Ao	2	..	15176b	57	3276	0.7	-37 17	8.9	9.4	G5	3	..	20534b
8	686	0.5	-69 40	8.5	9.7	K5	2	..	15223b	58	686	0.7	-65 34	8.2	8.6	F5	8	..	15223b
9	350	0.6	+72 49	7.50	7.50	Ao	8	..	37559i	59	1507	0.8	+21 2	9.0	9.1	A3	1	..	38238i
10	937	0.6	+61 33	9.0	10.2	K5	2	..	37526i	60	..	0.8	+15 58	..	..	A	1	..	4413m
11	1457	0.6	+29 4	9.8	9.8	A	1	..	38172i	61	..	0.8	+13 30	..	..	A	1	..	4413m
12	1462	0.6	+15 49	9.7	10.5	G5	1	..	4413m	62	1413	0.8	+10 25	8.3	8.3	Ao	3	..	36977i
13	1552	0.6	+13 29	10.4	10.4	A	1	..	4413m	63	1646	0.8	+8 9	10.4	10.4	Ao	2	..	15139b
14	1419	0.6	+12 46	8.5	9.6	K2	1	..	36977i	64	1536	0.8	+5 38	9.0	9.0	Ao	3	..	15139b
15	1513	0.6	+9 15	9.4	9.9	F8	3	..	15139b	65	1590	0.8	-0 52	7.7	8.2	F8	7	..	37700i
16	1514	0.6	+6 2	8.1	8.4	Fo	4	..	37652i	66	1589	0.8	-0 59	9.0	9.0	Ao	3	..	20867b
17	1534	0.6	+5 1	9.7	9.7	A	1	..	15139b	67	1734	0.8	-8 34	7.8	..	Oe5	6	..	44407b
18	1581	0.6	+4 53	9.2	9.2	Ao	2	0.1	15139b	68	1749	0.8	-16 22	8.9	8.9	B9	6	..	46170b
19	1588	0.6	-1 3	8.2	9.2	Ko	2	..	37700i	69	1750	0.8	-16 29	9.1	9.2	A5	6	..	15402b
20	1810	0.6	-4 24	9.3	9.8	F8	2	..	44407b	70	1677	0.8	-20 4	6.99	8.3	Ko	6	..	12631b
21	1731	0.6	-7 59	7.16	8.16	Ko	3	..	38609i	71	1709	0.8	-20 34	8.5	8.7	G5	3	..	12631b
22	1778	0.6	-11 8	9.7	9.7	B9	4	..	24340b	72	1738	0.8	-21 18	6.82	8.3	Ko	7	..	12631b
23	1771	0.6	-12 11	8.5	8.5	B9	2	..	8909b	73	3820	0.8	-26 28	8.9	8.6	B9	6	..	24433b
24	1705	0.6	-14 16	9.3	9.3	Ao	2	..	24340b	74	3602	0.8	-27 36	9.7	9.2	Ao	2	..	24433b
25	1637	0.6	-15 43	8.7	8.8	A2	6	..	15402b	75	3852	0.8	-29 32	9.5	9.2	G5	2	..	24433b
26	1746	0.6	-16 22	9.3	9.7	F5	1	..	15402b	76	3994	0.8	-31 51	7.9	7.6	B8	8	..	18926b
27	1675	0.6	-19 40	8.5	8.6	F5	4	..	12631b	77	3311	0.8	-34 53	9.55	9.5	F5	4	3.1	20670b
28	1707	0.6	-20 55	8.9	8.6	A3	4	..	12631b	78	3133	0.8	-38 24	10.6	10.8	Ko	1	..	20670b
29	1732	0.6	-21 53	6.19	7.7	Ko	5	..	42935b	79	2927	0.8	-42 23	9.8	9.4	A3	2	..	20556b
30	3131	0.6	-38 8	10.3	10.5	Ko	1	..	20670b	80	2904	0.8	-43 25	9.2	9.4	K2	1	..	20556b
31	2771	0.6	-41 3	7.3	8.5	Ko	6	..	20671b	81	2583	0.8	-49 55	10.0	10.5	K2	1	..	38414b
32	753	0.6	-59 18	7.2	8.8	K5	4	..	18486b	82	486	0.9	+66 28	9.4	9.5	A3	2	..	38155i
33	938	0.7	+60 57	6.73	7.73	Ko	7	..	37526i	83	1031	0.9	+60 54	8.7	9.8	K2	3	..	37526i
34	1283	0.7	+51 32	7.8	9.0	K5	2	..	37515i	84	1038	0.9	+57 16	8.6	9.6	Ko	2	..	37526i
35	1795	0.7	+40 37	8.6	9.4	G5	1	..	37501i	85	1584	0.9	+44 11	6.95	7.73	G5	7	..	37501i
36	1554	0.7	+35 41	9.4	9.7	Fo	2	..	37447i	86	1530	0.9	+34 9	6.13	7.13	Ko	7	0.7	37527i
37	1480	0.7	+32 15	9.4	9.8	F5	2	..	37447i	87	1543	0.9	+3 40	9.2	9.6	F5	1	..	37652i
38	1597	0.7	+23 24	8.29	9.29	Ko	1	..	38238i	88	1544	0.9	-1 18	9.7	9.7	Ao	1	..	20867b
39	1706	0.7	+20 45	8.7	9.5	G5	1	..	38238i	89	1835	0.9	-9 29	8.7	9.7	Ko	2	..	44407b
40	1605	0.7	+19 16	7.7	8.7	Ko	3	..	38238i	90	1858	0.9	-10 17	8.9	10.0	K2	1	..	24340b
41	..	0.7	+16 15	..	..	A	1	R	4413m	91	1859	0.9	-11 1	9.5	9.5	B8	3	..	24340b
42	1514	0.7	+9 12	9.7	10.3	Go	1	..	15139b	92	1811	0.9	-13 12	9.5	9.5	Ao	2	..	46170b
43	1645	0.7	+8 0	9.7	9.8	A2	2	..	15139b	93	1710	0.9	-14 44	8.1	9.1	Ko	6	..	24340b
44	1516	0.7	+6 16	8.1	8.9	G5	2	..	37652i	94	1768	0.9	-17 19	10.0	10.0	Ao	1	..	15402b
45	1535	0.7	+5 40	8.7	8.7	B9	2	..	37652i	95	1681	0.9	-19 42	9.1	8.6	B9	4	..	12631b
46	1796	0.7	+0 9	9.2	9.2	Ao	2	..	37700i	96	4818	0.9	-24 24	10.4	9.2	G5	1	..	12631b
47	1542	0.7	-1 22	8.7	8.7	B8	4	..	20867b	97	3607	0.9	-27 17	8.9	8.9	G5	5	..	24433b
48	1922	0.7	-6 39	9.3	9.3	Ao	1	..	44407b	98	3998	0.9	-31 47	7.08	7.3	F2	8	..	18926b
49	1733	0.7	-8 52	9.1	8.9	B	3	R	44407b	99	3468	0.9	-33 44	10.6	9.5	Ao	3	..	20670b
50	1809	0.7	-13 54	8.9	9.0	A2	3	..	24340b	100	3326	0.9	-35 50	9.2	10.2	G5	3	5.1	20670b

## THE HENRY DRAPER CATALOGUE.

53700

7<sup>h</sup> 0<sup>m</sup>.9

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	3134	m. 0.9	° -38 17	10.3	10.1	Ko	2	..	20534b	51	1798	m. 1.1	° + 0 27	9.0	9.6	Go	3	..	39867b
2	2891	0.9	-40 35	10.8	9.9	Fo	2	..	20671b	52	1592	1.1	- 0 25	8.7	9.1	F5	2	..	20867b
3	2777	0.9	-41 46	9.7	10.2	G	1	..	20671b	53	1548	1.1	- 1 43	8.7	9.0	Fo	3	..	20867b
4	2929	0.9	-42 11	5.26	5.9	A2	..	0,7 R	56,123	54	1737	1.1	- 8 39	8.4	8.3	B5	1	..	38609i
5	2906	0.9	-43 28	5.80		Go	6	..	8969b	55	1862	1.1	-10 30	6.38	6.21	B3	5	2,5-	38609i
6	2907	0.9	-43 28	6.92	7.1	Go	7	R	20556b	56	1777	1.1	-12 40	7.20	7.08	B5	4	..	8909b
7	668	0.9	-63 28	8.9	9.9	Ko	4	..	15176b	57	1753	1.1	-16 33	8.5	9.5	Ko	4	..	15402b
8	425	0.9	-74 36	9.9	10.5	G	1	..	20652b	58	4008	1.1	-25 39	9.5	9.2	G5	4	..	24433b
9	..	0.9	-75 50	var.	var.	Mb	1	R	20652b	59	3136	1.1	-38 4	11.3	10.5	A	1	..	20670b
10	428	0.9	-76 30	9.0	10.0	Ko	3	..	20652b	60	2872	1.1	-46 44	9.0	10.0	K5	1	..	38414b
11	910	1.0	+62 17	7.6	8.8	K5	7	..	37526i	61	2771	1.1	-47 40	8.8	9.4	F2	5	..	38414b
12	1594	1.0	+41 48	8.8	8.8	Ao	7	..	37501i	62	1066	1.1	-52 16	6.62	6.8	B8	4	..	8951b
13	1595	1.0	+41 23	8.2	8.5	Fo	5	..	37501i	63	1230	1.1	-56 38	9.5	10.1	Go	1	..	13007b
14	1596	1.0	+40 58	7.8	7.9	A2	5	..	37501i	64	1109	1.2	+54 10	8.0	9.0	Ko	3	..	37526i
15	1385	1.0	+16 49	8.3	9.1	G5	7	5,2	4413m	65	1663	1.2	+42 39	8.6	8.9	Fo	4	..	37501i
16	1386	1.0	+16 16	10.4	10.4	A	2	..	4413m	66	1531	1.2	+24 19	6.90	8.25	Ma	4	..	38238i
17	1463	1.0	+15 46	9.4	9.8	F5	4	..	4413m	67	1465	1.2	+15 53	10.4	10.4	A	1	..	4413m
18	1553	1.0	+13 4	10.4	10.4	Ao	3	..	4413m	68	1464	1.2	+15 2	10.4	11.0	G	1	R	4413m
19	1596	1.0	+ 7 47	9.0	9.6	Go	4	..	15139b	69	1554	1.2	+13 32	9.7	10.7	Ko	2	..	4413m
20	1546	1.0	- 1 9	9.4	9.4	B9	4	..	20867b	70	1650	1.2	+ 8 14	9.0	9.4	F5	4	..	15139b
21	1547	1.0	- 1 24	9.4	9.4	Ao	1	..	20867b	71	1519	1.2	+ 6 17	8.3	8.3	B9	5	..	37652i
22	1727	1.0	- 3 55	9.2	9.3	A3	3	..	44407b	72	1550	1.2	+ 2 15	8.3	9.3	Ko	2	..	37700i
23	1781	1.0	-11 25	10.0	10.1	A2	3	..	24340b	73	1800	1.2	- 0 2	8.98	8.98	Ao	2	..	20867b
24	1640	1.0	-15 24	9.1	9.2	A2	4	..	15402b	74	1818	1.2	- 4 52	9.7	9.7	Ao	2	..	44407b
25	1711	1.0	-20 16	9.1	8.9	Ao	4	..	12631b	75	1925	1.2	- 6 29	9.1	10.5	Ma	1	..	44407b
26	R	1.0	-20 30	9.2	9.5	Fo	1	..	12631b	76	1865	1.2	-10 57	9.3	9.3	Ao	4	..	24340b
27	4822	1.0	-24 18	10.7	9.3	Ao	2	..	12631b	77	1814	1.2	-13 40	7.9	8.3	F5	8	..	24340b
28	4820	1.0	-24 57	8.50	8.1	B8	4	..	12666b	78	1642	1.2	-15 29	9.2	9.2	B9	2	..	15402b
29	4003	1.0	-25 39	10.9	9.3	Ao	4	..	24433b	79	1774	1.2	-17 12	9.7	9.7	Ao	2	..	15402b
30	3826	1.0	-26 26	9.0	8.9	A5	5	..	24433b	80	4011	1.2	-25 48	9.7	9.2	Fo	3	..	24433b
31	3823	1.0	-26 40	10.9	9.5	F5	2	..	24433b	81	4005	1.2	-31 22	7.5	8.9	K5	3	..	18926b
32	3824	1.0	-26 58	7.9	8.0	Ao	6	..	12666b	82	3475	1.2	-33 21	8.6	9.1	Ko	4	..	20670b
33	3470	1.0	-33 34	11.0	10.3	Ao	2	..	20670b	83	3331	1.2	-35 46	9.9	9.1	Ao	3	..	20534b
34	3051	1.0	-39 46	8.4	8.7	F5	5	..	20671b	84	3335	1.2	-36 35	9.9	10.3	G5	2	..	20670b
35	2779	1.0	-41 42	9.9	10.2	Ko	1	..	20671b	85	3139	1.2	-38 30	8.3	8.8	Ko	5	..	20534b
36	3110	1.0	-44 30	8.5	8.8	A2	3	..	20858b	86	2894	1.2	-40 51	9.3	9.1	Ao	4	..	20671b
37	2871	1.0	-46 16	9.0	10.0	K2	2	..	38414b	87	1136	1.2	-55 21	8.5	9.5	Ko	3	..	13007b
38	2770	1.0	-47 37	8.5	9.4	Ko	3	..	38414b	88	755	1.2	-59 44	9.9	10.0	A2	2	..	13007b
39	314	1.1	+74 7	9.5	9.5	Ao	3	..	38187i	89	1032	1.3	+60 14	8.2	8.5	F2	5	..	37526i
40	1001	1.1	+58 8	8.0	8.4	F5	6	..	37526i	90	1475	1.3	+33 0	9.5	9.5	Ao	2	..	37447i
41	1556	1.1	+35 23	10.2	10.2	A	1	..	37447i	91	1577	1.3	+22 52	var.	var.	Pec.	..	R	M
42	1474	1.1	+33 21	8.0	8.8	G5	4	..	37527i	92	1576	1.3	+22 40	var.	var.	K5	..	R	M
43	1459	1.1	+29 8	9.8	9.8	Ao	1	..	38172i	93	1563	1.3	+14 7	9.7	10.1	F5	2	..	4413m
44	1314	1.1	+28 21	6.23	6.21	B9	8	..	37478i	94	1556	1.3	+13 33	7.9	7.9	Ao	5	1,9	36977i
45	1388	1.1	+16 31	10.4	11.4	Ko	2	..	4413m	95	1555	1.3	+13 22	9.4	10.6	K5	2	..	4413m
46	1562	1.1	+14 44	10.4	10.5	A2	2	..	4413m	96	1447	1.3	+11 6	8.3	8.4	A2	2	..	36977i
47	1647	1.1	+ 8 42	9.2	9.5	F2	3	..	15139b	97	1517	1.3	+ 9 13	9.4	9.5	A2	3	..	15139b
48	1649	1.1	+ 8 5	9.7	9.7	B9	3	..	15139b	98	1651	1.3	+ 8 52	8.2	9.2	Ko	2	..	38971i
49	1546	1.1	+ 3 2	8.4	9.0	Go	3	..	37652i	99	1652	1.3	+ 8 28	8.7	9.9	K5	2	..	15139b
50	1799	1.1	+ 0 38	9.4	10.2	G5	2	..	37700i	100	1600	1.3	+ 7 47	8.4	8.5	A2	2	..	37652i

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

53800

7<sup>h</sup> 1<sup>m</sup>.3

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1595	1.3	- 0 46	9.7	9.7	Ao	3	..	20867b	51	1925	1.5	- 2 58	7.4	7.4	B9	5	1,10	38609i
2	1739	1.3	- 8 25	8.9	10.1	K5	1	..	44407b	52	1732	1.5	- 3 7	8.3	8.4	A5	8	5,2	20867b
3	1839	1.3	- 9 24	9.2	9.2	Ao	2	..	44407b	53	1733	1.5	- 3 45	9.1	9.2	A2	2	..	38609i
4	1711	1.3	-14 51	9.1	10.1	Ko	1	..	15402b	54	1738	1.5	- 7 9	9.5	9.5	B9	2	..	44407b
5	1755	1.3	-16 27	8.9	8.9	Ao	4	..	15402b	55	1740	1.5	- 8 18	10.0	10.1	A2	1	..	44407b
6	1675	1.3	-18 22	8.5	9.6	K2	3	..	15402b	56	1784	1.5	-11 7	9.1	10.1	Ko	1	..	24340b
7	1682	1.3	-19 16	9.1	8.9	A3	3	..	12631b	57	1781	1.5	-12 48	8.5	8.4	B5	7	..	24340b
8	1714	1.3	-20 38	8.7	8.0	B8	5	..	12631b	58	1643	1.5	-15 54	9.1	9.1	A	2	..	15402b
9	2934	1.3	-42 19	9.6	10.4	K5	1	..	20671b	59	1761	1.5	-16 21	9.1	9.1	B8	3	..	15402b
10	2936	1.3	-42 38	8.9	9.3	Ko	2	..	20556b	60	1680	1.5	-18 34	9.1	9.2	A5	4	..	15402b
11	2587	1.3	-49 26	5.12	5.18	A2	..	0,8R	56,123	61	4839	1.5	-24 25	10.2	8.9	Ao	2	..	12666b
12	2546	1.3	-50 18	10.0	9.6	G5	2	..	38414b	62	3836	1.5	-26 6	9.0	9.3	G5	3	..	24433b
13	1137	1.3	-55 29	8.8	8.9	F5	4	..	13007b	63	3838	1.5	-26 38	10.9	10.1	Ao	1	..	24433b
14	1231	1.3	-56 52	9.1	9.8	A3	3	..	13007b	64	3821	1.5	-29 2	10.0	8.8	A	2	..	18926b
15	692	1.4	+63 28	8.2	8.6	F5	6	..	37545i	65	3476	1.5	-33 36	10.3	9.7	Go	2	..	20670b
16	1567	1.4	+36 1	8.4	8.9	F8	2	..	37447i	66	3145	1.5	-38 54	10.1	10.4	G5	1	..	20670b
17	1495	1.4	+17 0	8.3	8.8	G	2	..	4413m	67	1138	1.5	-55 40	8.8	9.2	G5	3	..	13007b
18	1495	1.4	+17 0	8.3	8.8	F8	5	R	4413m	68	1139	1.5	-55 48	7.4	8.6	Ko	6	..	13007b
19	1564	1.4	+14 47	10.4	11.4	Ko	1	..	4413m	69	1116	1.5	-57 21	8.5	9.8	K2	3	..	13007b
20	1565	1.4	+14 31	10.4	10.9	F8	2	..	4413m	70	756	1.5	-60 55	8.5	9.2	F5	3	5,2	15176b
21	1557	1.4	+13 17	9.2	9.6	F5	4	..	4413m	71	1173	1.6	+52 13	8.6	9.2	Go	1	..	37515i
22	1427	1.4	+12 29	8.7	9.7	K	1	..	36977i	72	1712	1.6	+20 40	8.7	9.9	K5	1	..	38238i
23	1842	1.4	- 9 8	8.5	8.5	B8	1	..	38609i	73	1488	1.6	+18 29	8.7	8.8	A2	2	..	38238i
24	1844	1.4	-10 1	7.96	7.94	B9	5	1,2	24340b	74	1390	1.6	+15 57	7.9	8.7	G5	7	0,2	4413m
25	1756	1.4	-16 14	9.2	9.2	Ao	2	..	15402b	75	1466	1.6	+15 40	10.0	10.1	A2	3	..	4413m
26	1679	1.4	-18 34	9.2	9.2	Ao	2	..	15402b	76	1467	1.6	+15 21	10.4	10.9	F8	2	..	4413m
27	1678	1.4	-18 48	9.0	9.4	F5	2	..	15402b	77	1558	1.6	+13 24	9.7	9.8	A2	5	..	4413m
28	1683	1.4	-19 30	8.6	8.6	F5	6	..	12631b	78	1416	1.6	+10 2	7.90	8.18	Fo	4	..	36977i
29	4856	1.4	-23 3	9.3	9.2	G5	2	..	12631b	79	1653	1.6	+ 8 45	9.2	9.2	B8	3	..	15139b
30	4014	1.4	-25 56	9.5	9.2	F2	5	..	24433b	80	1803	1.6	+ 0 13	9.2	9.2	Ao	3	..	37700i
31	3615	1.4	-27 34	10.7	9.3	Ao	2	..	24433b	81	1597	1.6	- 0 52	9.4	9.5	A2	2	..	20867b
32	3868	1.4	-29 3	9.0	8.6	A2	4	..	18926b	82	1735	1.6	- 3 30	8.9	9.9	Ko	4	..	44407b
33	3287	1.4	-37 21	10.3	10.0	Fo	3	..	20670b	83	1822	1.6	- 4 28	9.5	9.5	A	2	R	44407b
34	2896	1.4	-40 20	7.05	8.4	Ko	7	..	20671b	84	1820	1.6	- 4 47	8.7	9.7	Ko	1	..	38609i
35	2897	1.4	-40 35	9.9	9.9	Go	2	..	20671b	85	4841	1.6	-24 51	8.9	8.3	B8	3	..	12666b
36	2938	1.4	-42 27	9.6	9.3	A3	1	..	20556b	86	4019	1.6	-25 54	8.3	9.3	Ko	3	..	24433b
37	2940	1.4	-42 54	9.6	9.9	G5	1	..	20671b	87	3840	1.6	-26 6	9.0	9.2	Go	3	..	24433b
38	2909	1.4	-43 35	8.2	8.3	Ao	7	..	20858b	88	3839	1.6	-26 30	10.7	9.7	Ao	2	..	24433b
39	2875	1.4	-46 37	9.1	10.3	Ko	2	..	38414b	89	3824	1.6	-28 55	8.3	8.1	Ao	6	..	18926b
40	2548	1.4	-50 30	7.4	8.5	Ko	4	..	38414b	90	3889	1.6	-30 22	8.1	8.8	G5	2	..	18926b
41	1115	1.4	-57 35	8.9	9.8	Ko	2	..	13007b	91	3478	1.6	-33 59	7.44	7.9	F5	7	..	20534b
42	142	1.4	-83 52	7.75	8.2	F5	8	0,9	15145b	92	3291	1.6	-37 16	10.6	10.5	Ao	2	..	20670b
43	621	1.5	+64 21	9.4	9.7	F	2	..	37545i	93	3146	1.6	-38 12	9.3	9.6	F8	2	..	20534b
44	1607	1.5	+23 22	9.4	9.5	A2	1	..	38238i	94	3057	1.6	-39 14	9.3	9.6	A2	2	..	20534b
45	1512	1.5	+21 3	9.1	9.1	A	1	..	38238i	95	2913	1.6	-43 26	8.5	9.1	K5	2	..	20858b
46	1612	1.5	+19 22	8.4	8.8	F5	2	..	38238i	96	513	1.6	-71 9	9.0	10.0	Ko	2	..	15168b
47	1517a	1.5	+ 9 1	var.	var.	Md	1	R	15139b	97	417	1.6	-75 16	9.2	10.4	K5	3	..	20652b
48	1602	1.5	+ 7 25	9.7	10.2	F8	2	..	15139b	98	1534	1.7	+34 39	8.0	8.0	Ao	4	..	37527i
49	1520	1.5	+ 6 15	9.4	10.5	K2	2	..	15139b	99	1533	1.7	+33 58	6.47	7.47	Ko	6	0,6	37527i
50	1588	1.5	+ 4 52	7.86	8.86	Ko	2	..	37652i	100	1581	1.7	+22 54	9.12	9.18	A2	1	..	38238i



## THE HENRY DRAPER CATALOGUE.

53900

7h 1<sup>m</sup>.7

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1392	1.7	+16 22	9.7	9.8	A2	4	..	4413m	51	3876	1.9	-29 46	8.7	9.7	Mb	2	..	24433b
2	..	1.7	+15 31	..	..	A	2	..	4413m	52	3327	1.9	-34 37	6.32	7.2	Fo	10	..	20534b
3	1559	1.7	+13 37	10.4	11.2	G5	1	..	4413m	53	3326	1.9	-34 53	9.9	10.0	Fo	3	..	2067ob
4	1966	1.7	-5 50	8.4	8.4	B9	3	..	3860gi	54	2594	1.9	-49 29	9.6	10.8	Ko	1	..	38414b
5	1745	1.7	-8 10	10.4	10.4	Ao	2	..	44407b	55	2553	1.9	-50 13	7.54	8.7	Ko	5	..	38414b
6	1744	1.7	-8 54	9.1	9.2	A2	3	..	44407b	56	2270	1.9	-51 4	9.6	9.7	Ao	2	..	38414b
7	1871	1.7	-10 4	7.96	9.03	K2	3	..	2434ob	57	1039	2.0	+57 31	7.8	8.8	Ko	4	..	37526i
8	1714	1.7	-14 50	9.3	9.3	B9	2	..	15402b	58	1183	2.0	+56 36	8.6	9.0	F5	6	..	37526i
9	1646	1.7	-15 43	9.5	9.5	Ao	2	..	15402b	59	1558	2.0	+35 31	10.2	10.5	F	1	..	37447i
10	1762	1.7	-16 4	9.1	10.1	Ko	2	..	15402b	60	1495	2.0	+31 29	8.8	8.8	Ao	2	..	37527i
11	1681	1.7	-18 33	9.1	9.6	F8	4	..	15402b	61	1319	2.0	+28 22	9.4	9.8	F5	3	..	38172i
12	1696	1.7	-22 56	9.1	8.9	A2	5	..	12631b	62	1393	2.0	+16 50	10.4	11.4	Ko	1	..	4413m
13	4842	1.7	-24 5	9.7	9.2	Ao	3	..	12631b	63	1468	2.0	+15 55	10.4	10.7	F	1	..	4413m
14	3620	1.7	-27 8	9.0	8.0	B8	7	..	24433b	64	..	2.0	+15 38	..	..	A	2	..	4413m
15	3825	1.7	-28 24	9.7	9.0	Ao	2	..	24433b	65	..	2.0	+15 23	..	..	A2	2	..	4413m
16	3335	1.7	-35 36	9.5	9.2	F2	3	..	20534b	66	1568	2.0	+14 30	7.9	8.7	G5	6	..	4413m
17	3334	1.7	-35 47	var.	var.	Mc	6	R	20534b	67	..	2.0	+13 52	..	..	F	1	..	4413m
18	3059	1.7	-39 37	9.9	9.6	F	2	..	2067ob	68	1519	2.0	+9 22	9.0	9.0	Ao	4	..	15139b
19	2946	1.7	-42 10	10.0	9.7	Fo	2	..	20671b	69	1657	2.0	+7 58	10.4	10.5	A2	1	..	15139b
20	2592	1.7	-49 51	9.8	10.8	Ma	1	..	38414b	70	1555	2.0	+1 57	9.0	9.1	A2	3	..	39867b
21	826	1.7	-59 2	5.69	5.9	B9	..	..	56,123	71	1601	2.0	-0 6	9.28	9.34	A2	2	0,2	20867b
22	418	1.7	-75 29	9.4	9.9	F8	4	..	20652b	72	1967	2.0	-5 19	7.9	8.2	F2	4	..	3860gi
23	912	1.8	+62 1	8.5	8.8	Fo	7	..	37526i	73	1741	2.0	-7 6	9.0	9.0	B9	5	..	44407b
24	1587	1.8	+44 25	7.44	7.72	Fo	7	..	37501i	74	1790	2.0	-11 8	5.28	5.11	B3	..	0,8-	56,83
25	1660	1.8	+37 36	6.32	7.32	Ko	8	..	37447i	75	1788	2.0	-12 14	6.40	6.28	B5p	7	R	8909b
26	1479	1.8	+33 26	8.0	8.1	A5	6	..	37527i	76	1683	2.0	-18 58	8.5	8.9	F5	6	..	15402b
27	1423	1.8	+30 0	8.31	9.09	G5	3	5,1	37527i	77	1720	2.0	-20 52	9.0	9.3	G5	2	..	12631b
28	1603	1.8	+7 45	9.2	10.4	K5	1	..	15139b	78	4871	2.0	-23 12	9.7	8.4	Ao	3	..	20767b
29	1543	1.8	+5 4	5.95	5.90	B8	9	..	37652i	79	4849	2.0	-24 31	8.1	8.1	Fo	4	..	12666b
30	1926	1.8	-6 33	9.3	9.4	A2	2	..	44407b	80	4029	2.0	-25 48	9.2	9.8	K5	1	..	24433b
31	1788	1.8	-11 23	9.0	9.0	B9	5	..	2434ob	81	3852	2.0	-26 39	9.0	8.4	Ao	6	..	24433b
32	1763	1.8	-17 4	9.2	9.5	Fo	2	..	15402b	82	3489	2.0	-33 26	10.3	10.0	G5	3	..	2067ob
33	3847	1.8	-26 34	10.4	9.8	G5	1	..	24433b	83	3149	2.0	-38 5	7.32	7.8	Ao	8	..	20534b
34	3827	1.8	-28 7	10.2	9.2	A2	2	..	24433b	84	3153	2.0	-39 0	9.3	9.1	F8	4	..	20534b
35	3828	1.8	-28 20	8.5	9.2	G5	3	..	24433b	85	3062	2.0	-39 7	9.5	9.4	Ao	3	..	20534b
36	3483	1.8	-33 13	8.6	8.6	Ao	5	..	2067ob	86	2949	2.0	-42 42	9.8	9.6	Fo	2	..	20671b
37	3485	1.8	-33 49	9.9	10.0	F2	2	..	2067ob	87	2595	2.0	-49 53	10.2	10.2	Go	1	..	38414b
38	3294	1.8	-37 49	10.6	11.1	Ko	2	..	2067ob	88	1120	2.0	-57 20	8.8	10.1	K5	1	..	13007b
39	1567	1.9	+14 8	8.5	9.5	Ko	5	..	4413m	89	515	2.0	-71 15	7.7	8.2	F8	5	..	15168b
40	1566	1.9	+14 7	8.7	9.0	Fo	6	..	4413m	90	365	2.1	+73 49	10.2	10.7	F8	2	..	37559i
41	..	1.9	+14 6	..	..	A	1	..	4413m	91	1661	2.1	+37 42	8.5	9.1	Go	3	..	37447i
42	1453	1.9	+11 16	8.5	8.8	F2	1	..	36977i	92	1535	2.1	+34 49	10.0	10.4	F5	1	..	37447i
43	1420	1.9	+10 41	9.4	9.4	Ao	3	..	15139b	93	1501	2.1	+17 3	10.0	10.0	Ao	4	..	4413m
44	1590	1.9	+4 5	9.0	9.1	A2	2	..	37652i	94	1470	2.1	+15 45	10.4	10.7	F2	3	..	4413m
45	1554	1.9	-1 24	9.0	9.4	F5	2	..	20867b	95	1469	2.1	+15 14	10.4	11.2	G5	1	..	4413m
46	1931	1.9	-2 36	7.9	7.9	B8	8	2,3	20867b	96	1560	2.1	+13 12	10.4	10.5	A2	4	..	4413m
47	1789	1.9	-11 18	8.7	9.7	Ko	3	..	2434ob	97	1421	2.1	+10 1	10.4	10.4	A	1	..	15139b
48	1787	1.9	-12 33	10.1	10.0	B5	2	..	2434ob	98	1520	2.1	+9 11	10.0	10.0	B9	2	..	15139b
49	1819	1.9	-13 46	9.1	9.1	Ao	2	..	2434ob	99	1658	2.1	+8 49	9.7	9.7	Ao	2	..	15139b
50	1716	1.9	-15 3	8.91	8.91	Ao	4	..	15402b	100	1605	2.1	+7 9	8.7	8.7	Ao	4	..	15139b

JOHN G. NEILL LIBRARY,  
HARVARD COLLEGE OBSERVATORY,  
CAMBRIDGE, MASS. 02138

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

54000

7<sup>h</sup> 2<sup>m</sup>.1

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1553	2.1	+ 3 28	9.4	10.2	G5	1	..	37652i	51	1422	2.3	+10 9	9.02	10.20	K5	1	..	15139b
2	1556	2.1	+ 2 52	9.2	9.2	A0	3	..	39867b	52	1526	2.3	+ 6 31	9.2	9.3	A2	5	..	15139b
3	1826	2.1	- 4 30	9.7	9.7	A0	2	..	44407b	53	1554	2.3	+ 3 34	8.8	9.8	K0	2	..	39867b
4	1852	2.1	- 9 39	8.7	9.7	K0	1	..	44407b	54	1557	2.3	- 1 23	8.3	9.3	K0	2	..	20867b
5	1821	2.1	-13 59	9.5	9.6	A5	1	..	4617ob	55	1936	2.3	- 2 49	8.3	9.3	K0	5	..	20867b
6	2838	2.1	-28 9	10.9	9.2	B9	3	..	24433b	56	1742	2.3	- 3 4	9.1	9.1	B9	4	..	20867b
7	3330	2.1	-34 19	9.9	10.0	F2	2	..	2067ob	57	1827	2.3	- 4 52	9.1	9.4	F2	2	..	38609i
8	3299	2.1	-37 42	11.0	10.7	A0	2	..	2067ob	58	1970	2.3	- 5 34	9.1	9.9	G5	2	..	44407b
9	3063	2.1	-39 43	7.9	9.0	K0	4	..	20671b	59	1749	2.3	-21 52	8.1	8.4	G5	6	..	12631b
10	2907	2.1	-40 35	10.6	9.6	A0	3	..	20671b	60	1750	2.3	-21 58	9.2	9.2	F0	4	..	12631b
11	1122	2.1	-57 28	9.5	9.5	A0	3	..	13007b	61	1703	2.3	-22 51	9.5	9.0	A3	4	..	12631b
12	1052	2.2	+59 32	8.2	9.2	K0	4	..	37526i	62	4885	2.3	-23 35	10.4	9.8	K0	1	..	12631b
13	1648	2.2	+43 9	8.7	9.7	K0	1	..	37501i	63	4038	2.3	-25 19	8.7	8.7	B9	4	..	12666b
14	1569	2.2	+36 3	8.5	8.5	A0	2	..	37447i	64	3861	2.3	-26 58	10.7	9.3	A	2	..	24433b
15	1486	2.2	+32 45	8.6	8.7	A3	2	..	37527i	65	3494	2.3	-33 29	9.3	10.3	G5	2	..	2067ob
16	1587	2.2	+22 4	8.8	8.9	A3	3	..	38238i	66	3339	2.3	-35 34	9.5	10.3	K0	2	..	2067ob
17	1585	2.2	+22 3	8.6	8.7	A5	4	..	38238i	67	3348	2.3	-36 42	9.3	9.4	A2	3	..	20534b
18	1471	2.2	+15 16	10.0	10.0	A	4	..	4413m	68	2794	2.3	-41 4	8.6	9.3	A0	6	..	20671b
19	1570	2.2	+14 31	9.0	10.0	K0	3	..	4413m	69	2954	2.3	-42 32	9.8	9.3	A0	3	..	20556b
20	1429	2.2	+12 32	8.8	8.9	A2	1	..	36977i	70	352	2.4	+71 59	6.45	7.45	K0	8	..	37559i
21	1545	2.2	+ 5 18	8.7	9.8	K2	2	..	15139b	71	1393	2.4	+45 7	9.4	9.5	A2	2	..	37501i
22	1935	2.2	- 2 53	9.5	9.5	A0	1	..	20867b	72	1601	2.4	+41 48	8.7	9.9	K5	1	..	37501i
23	1744	2.2	- 7 17	9.2	9.2	A0	3	..	44407b	73	1693	2.4	+38 46	7.80	7.94	A5	6	..	37447i
24	1745	2.2	- 7 35	8.9	8.8	B5	3	..	44407b	74	1497	2.4	+31 48	9.5	10.1	G	2	..	37447i
25	1793	2.2	-11 10	8.4	8.3	B5	7	..	2434ob	75	1515	2.4	+21 24	9.8	11.2	Ma	..	..	M
26	1684	2.2	-18 23	10.0	10.0	A0	1	..	15402b	76	1517	2.4	+21 1	8.2	8.7	F8	4	..	38238i
27	1702	2.2	-22 56	8.5	8.9	Ma	3	..	12631b	77	1475	2.4	+15 32	10.4	11.6	K5	1	..	4413m
28	1701	2.2	-23 0	10.4	9.5	A0	3	..	12631b	78	1522	2.4	+ 9 0	9.7	10.1	F5	2	..	15139b
29	4879	2.2	-23 16	8.5	8.3	A0	6	0,3	20767b	79	1607	2.4	+ 7 38	5.92	6.92	K0	8	..	37652i
30	3624	2.2	-27 42	9.2	9.2	F5	2	..	24433b	80	1559	2.4	- 1 40	8.4	8.4	A0	7	..	20867b
31	3907	2.2	-30 30	6.38	6.8	B8	7	E	8905b	81	1973	2.4	- 5 8	10.0	9.9	B5	2	..	44407b
32	3491	2.2	-33 23	9.3	9.1	F0	4	..	2067ob	82	1972	2.4	- 5 46	10.1	10.2	A2	2	..	44407b
33	3332	2.2	-34 59	10.6	10.5	Go	3	..	2067ob	83	1748	2.4	- 8 58	9.1	9.1	B8	3	..	44407b
34	3347	2.2	-36 34	8.9	9.4	G5	3	..	20534b	84	1790	2.4	-12 5	8.3	8.4	A2	7	..	2434ob
35	3302	2.2	-37 28	8.6	8.8	A0	4	..	20534b	85	1824	2.4	-13 58	9.5	9.6	A2	1	..	4617ob
36	3154	2.2	-38 31	8.6	9.6	K2	3	..	20534b	86	1717	2.4	-14 33	9.0	9.0	B9	3	..	15402b
37	3064	2.2	-39 4	9.5	9.9	G5	1	..	20534b	87	..	2.4	-15 44	..	..	F0	2	..	15402b
38	2908	2.2	-40 29	6.9	8.1	Go	10	..	20671b	88	1769	2.4	-16 35	9.1	9.1	A0	3	..	15402b
39	2918	2.2	-43 4	10.0	10.0	F0	1	..	20671b	89	1770	2.4	-16 39	9.2	9.8	G	1	..	15402b
40	2596	2.2	-49 31	9.8	10.2	Go	1	..	38414b	90	1692	2.4	-19 30	9.0	9.0	F2	2	..	20767b
41	2599	2.2	-49 40	9.2	9.6	G5	3	..	38414b	91	1751	2.4	-21 17	9.5	9.3	A0	2	..	12631b
42	239	2.3	+81 2	8.38	9.38	K0	2	2,2	38331i	92	1754	2.4	-21 18	9.1	9.2	F2	3	..	12631b
43	941	2.3	+61 54	9.4	9.5	A2	3	..	37526i	93	1752	2.4	-21 48	9.1	8.9	A2	4	..	12631b
44	1536	2.3	+34 6	6.67	7.67	K0	5	..	37527i	94	4039	2.4	-25 59	10.0	9.2	A0	3	..	24433b
45	1502	2.3	+17 1	9.0	9.0	B9	7	..	4413m	95	3334	2.4	-34 21	9.2	9.5	K2	4	..	2067ob
46	1473	2.3	+15 42	7.5	8.0	F8	6	2,3	4413m	96	2919	2.4	-45 10	9.1	9.4	F5	2	E	20858b
47	1472	2.3	+15 20	9.7	10.2	F8	2	..	4413m	97	2791	2.4	-47 15	9.6	10.3	K2	1	..	38414b
48	1571	2.3	+14 52	10.0	10.1	A2	3	..	4413m	98	622	2.5	+64 11	9.2	10.2	K	1	..	37545i
49	1430	2.3	+12 44	7.8	8.9	K2	2	..	36977i	99	1053	2.5	+59 13	7.58	8.58	K0	5	..	37526i
50	1457	2.3	+11 2	9.0	9.0	B9	3	..	15139b	100	1476	2.5	+15 41	7.4	7.9	F8	7	2,3	4413m

## THE HENRY DRAPER CATALOGUE.

54100

7<sup>h</sup> 2<sup>m</sup>.5

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	..	m. 2.5	° 15 1	..	..	A	1	..	4413m	51	3868	m. 2.6	° 26 28	9.0	9.2	Ko	2	..	24433b
2	1548	2.5	+ 5 0	9.7	9.7	Ao	3	..	15139b	52	3918	2.6	- 30 7	9.05	8.8	Fo	2	..	18926b
3	1749	2.5	- 8 31	8.9	9.9	Ko	2	..	44407b	53	3163	2.6	- 38 14	6.06	7.0	Go	5	..	7406b
4	1853	2.5	- 9 26	8.0	7.9	B5	1	..	38609i	54	551	2.6	- 72 24	7.5	7.8	Fo	8	..	20652b
5	1792	2.5	- 12 12	8.3	9.4	K2	2	..	2434ob	55	487	2.7	+ 66 46	7.7	8.9	K5	5	..	37545i
6	1651	2.5	- 15 4	9.41	9.41	Ao	3	..	15402b	56	1288	2.7	+ 51 55	8.2	8.7	F8	3	..	37515i
7	1774	2.5	- 16 42	9.0	10.0	Ko	3	..	15402b	57	1397	2.7	+ 50 5	8.55	8.55	Ao	4	..	37515i
8	1772	2.5	- 17 2	10.1	10.1	Ao	2	..	4617ob	58	1593	2.7	+ 44 30	9.2	9.2	Ao	2	..	37501i
9	1755	2.5	- 21 24	8.7	8.6	A2	6	..	12631b	59	1571	2.7	+ 36 45	6.67	6.67	Ao	8	..	37447i
10	4041	2.5	- 25 51	9.5	8.9	Ao	7	1,2	24433b	60	1466	2.7	+ 29 6	8.7	8.7	Ao	4	0,3	38172i
11	3866	2.5	- 26 28	11.2	9.2	Ao	3	..	24433b	61	1464	2.7	+ 26 55	9.0	9.1	A2	2	..	38172i
12	3497	2.5	- 33 54	10.6	9.4	Ao	3	..	2067ob	62	1573	2.7	+ 14 24	10.4	11.8	Ma	1	..	4413m
13	3350	2.5	- 36 16	8.3	9.1	Ko	3	..	20534b	63	1562	2.7	+ 13 50	9.7	10.2	F8	4	..	4413m
14	3305	2.5	- 37 14	10.1	9.7	A2	2	..	20534b	64	1561	2.7	+ 13 43	9.4	10.0	Go	3	..	4413m
15	2956	2.5	- 42 50	8.8	9.1	K2	2	..	20556b	65	1659	2.7	+ 8 46	8.7	9.1	F5	4	..	15139b
16	2792	2.5	- 47 32	9.0	8.9	F8	5	..	38414b	66	1595	2.7	+ 4 22	8.5	9.5	Ko	2	..	39867b
17	2696	2.5	- 48 55	8.3	10.2	Ma	3	..	38414b	67	1699	2.7	+ 1 52	9.7	9.5	B	1	..	39867i
18	1232	2.5	- 56 36	5.30	5.30	Ao	..	..	56,123	68	1749	2.7	- 3 58	9.2	9.2	Ao	3	..	44407b
19	1233	2.5	- 56 42	8.5	9.2	A5	2	..	13007b	69	1749	2.7	- 7 27	9.1	9.1	Ao	3	..	44407b
20	206	2.5	- 80 12	9.5	10.6	K2	3	..	20652b	70	1748	2.7	- 7 39	8.9	9.9	Ko	2	..	44407b
21	410	2.6	+ 69 9	8.9	9.0	A3	2	..	38155i	71	1777	2.7	- 16 41	9.2	10.3	K2	1	..	15402b
22	1034	2.6	+ 60 23	7.31	8.31	Ko	7	..	37526i	72	1697	2.7	- 19 51	10.2	9.7	A3	1	..	15402b
23	1111	2.6	+ 54 32	8.6	9.6	Ko	2	E	37526i	73	4868	2.7	- 24 48	6.20	7.8	K2	4	..	42935b
24	1649	2.6	+ 43 27	9.2	9.8	G	1	..	37501i	74	4042	2.7	- 31 56	9.0	7.9	Ao	4	..	18926b
25	1562	2.6	+ 34 57	9.5	10.7	K5	1	..	37447i	75	3339	2.7	- 34 35	8.9	9.7	K2	3	..	2067ob
26	1463	2.6	+ 26 47	9.1	9.7	G	1	..	38172i	76	3352	2.7	- 36 28	9.3	9.2	Ao	4	..	20534b
27	1590	2.6	+ 22 6	8.0	9.1	K2	2	..	38238i	77	3070	2.7	- 39 42	8.6	9.1	Go	4	..	20671b
28	1395	2.6	+ 16 48	8.4	8.4	Ao	7	2,2	4413m	78	2795	2.7	- 47 33	8.2	9.1	Ko	5	..	38414b
29	1394	2.6	+ 16 41	10.4	11.2	G5	1	..	4413m	79	2561	2.7	- 50 12	6.49	8.4	Ko	7	..	38414b
30	1396	2.6	+ 16 18	7.02	7.80	G5	7	0,4	4413m	80	590	2.7	- 70 25	8.1	8.9	G5	4	..	15168b
31	1397	2.6	+ 16 5	5.58	6.58	Ko	..	0,8	56,83	81	237	2.7	- 79 28	9.3	10.3	Ko	4	..	20652b
32	..	2.6	+ 14 42	..	..	K2	1	..	4413m	82	1430	2.8	+ 30 32	7.8	8.3	F8	4	2,3	37478i
33	1572	2.6	+ 14 36	10.4	11.4	Ko	1	..	4413m	83	1499	2.8	+ 18 27	7.4	8.4	Ko	4	..	37472i
34	1464	2.6	+ 11 10	8.4	8.5	A3	1	..	36977i	84	1504	2.8	+ 17 31	7.9	8.0	A5	2	2,2	36977i
35	1525	2.6	+ 9 54	10.4	10.4	Ao	2	..	15139b	85	..	2.8	+ 16 19	..	..	K2	1	..	4413m
36	1527	2.6	+ 9 6	8.8	9.8	Ko	2	..	15139b	86	..	2.8	+ 16 6	..	..	Ao	3	..	4413m
37	1530	2.6	+ 6 14	9.2	9.3	A3	4	..	15139b	87	1477	2.8	+ 15 26	10.4	11.5	K2	1	..	4413m
38	1558	2.6	+ 2 8	10.4	10.4	B9	1	..	39867b	88	1660	2.8	+ 8 43	9.2	9.7	F8	3	..	15139b
39	1698	2.6	+ 1 56	9.0	9.6	Go	2	..	39867b	89	1610	2.8	+ 7 16	8.5	8.5	B8	3	..	37652i
40	1975	2.6	- 5 57	8.7	8.8	A2	2	..	38609i	90	1532	2.8	+ 6 10	9.2	9.3	A3	3	..	15139b
41	1854	2.6	- 9 50	6.90	6.96	A2	7	0,4	20801b	91	1559	2.8	+ 2 51	9.0	9.0	B8	3	..	39867b
42	1795	2.6	- 12 2	8.3	9.4	K2	3	..	2434ob	92	1607	2.8	- 0 48	9.7	9.7	Ao	1	..	20867b
43	1794	2.6	- 12 56	8.6	8.6	Ao	3	..	2434ob	93	1752	2.8	- 7 5	10.0	10.0	Ao	1	R	44407b
44	1782	2.6	- 17 28	9.3	9.3	Ao	1	..	15402b	94	1751	2.8	- 7 29	9.0	9.0	Ao	4	..	44407b
45	1686	2.6	- 18 17	10.4	10.4	Ao	1	..	15402b	95	1877	2.8	- 11 0	9.5	9.5	B9	2	..	2434ob
46	1687	2.6	- 18 47	9.1	10.2	K2	1	..	15402b	96	1827	2.8	- 13 18	8.9	8.9	B9	4	..	2434ob
47	4893	2.6	- 23 30	10.7	9.3	A	2	..	12631b	97	1828	2.8	- 13 53	7.9	7.9	B8	7	..	2434ob
48	4865	2.6	- 24 14	9.7	9.2	B9	3	..	12631b	98	1653	2.8	- 15 14	9.7	10.5	G5	1	..	4617ob
49	4043	2.6	- 25 10	9.45	8.9	Ao	3	..	12666b	99	1785	2.8	- 17 52	9.3	9.3	Ao	1	..	15402b
50	4042	2.6	- 25 36	8.7	9.3	K2	2	..	24433b	100	1725	2.8	- 20 14	9.3	8.7	A2	5	..	12631b

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## ANNALS OF HARVARD COLLEGE OBSERVATORY.

54200

7<sup>h</sup> 2<sup>m</sup>.8

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	3636	m. 2.8	° -27 14	9.3	9.5	Ko	2	..	24433b	51	1935	m. 3.0	° - 6 57	9.5	9.6	A2	2	..	44407b
2	3342	2.8	-34 53	9.35	9.7	G5	4	..	2067ob	52	1754	3.0	- 8 50	9.7	9.7	B9	2	..	44407b
3	3344	2.8	-35 36	7.7	9.1	K2	3	..	20534b	53	1831	3.0	-13 33	8.3	9.5	K5	2	..	2434ob
4	3311	2.8	-37 5	9.9	10.0	Ao	1	..	20534b	54	1654	3.0	-15 6	8.71	9.49	G5	2	..	15402b
5	3309	2.8	-37 34	8.9	8.5	Ao	4	..	20534b	55	1727	3.0	-20 8	8.28	9.0	K2	3	..	12631b
6	3310	2.8	-37 59	9.9	9.7	A3	2	..	20534b	56	1761	3.0	-22 3	9.2	9.2	G5	2	..	12631b
7	2915	2.8	-40 47	8.0	9.3	Ko	3	..	20671b	57	4051	3.0	-25 37	7.4	8.7	K5	4	..	12666b
8	2959	2.8	-42 10	7.3	7.5	B9	9	..	20556b	58	3882	3.0	-26 15	9.5	8.6	B9	2	..	12666b
9	2604	2.8	-49 54	9.04	9.9	Ko	2	..	38414b	59	3883	3.0	-26 45	8.5	8.3	Ao	3	..	12666b
10	677	2.8	-63 22	10.2	10.2	A	2	..	15176b	60	3505	3.0	-33 53	10.8	10.3	A	1	..	2067ob
11	1505	2.9	+17 50	7.56	7.98	F5	4	5,3	38238i	61	3345	3.0	-34 15	9.3	10.0	F8	2	..	2067ob
12	1574	2.9	+14 4	10.4	10.4	Ao	2	..	4413m	62	2706	3.0	-48 41	9.2	10.5	G5	3	..	38414b
13	1563	2.9	+13 26	10.4	10.4	Ao	4	..	4413m	63	1128	3.0	-57 2	9.3	9.8	F8	2	..	13007b
14	1466	2.9	+11 13	8.7	9.2	F8	3	..	15139b	64	835	3.0	-58 40	8.2	8.3	Ao	4	..	18486b
15	1425	2.9	+10 50	8.7	9.7	Ko	2	..	15139b	65	646	3.0	-66 44	8.6	9.0	F5	6	..	15223b
16	1662	2.9	+ 8 37	8.4	9.5	K2	2	..	15139b	66	693	3.0	-67 14	10.1	10.1	A	1	..	15223b
17	1663	2.9	+ 8 2	7.3	7.3	Ao	7	..	37652i	67	552	3.0	-72 37	9.3	9.7	F5	2	..	20652b
18	1560	2.9	+ 3 32	9.4	9.4	A	4	R	37652i	68	419	3.0	-75 3	9.4	10.4	Ko	3	..	20652b
19	1750	2.9	- 3 13	8.3	9.7	Ma	2	0,1-	20867b	69	1044	3.1	+57 52	8.0	8.3	Fo	5	..	37526i
20	1751	2.9	- 4 1	8.7	8.7	Ao	2	..	38609i	70	1233	3.1	+45 57	8.5	8.5	Ao	2	..	37515i
21	1753	2.9	- 8 55	8.9	9.9	Ko	1	..	44407b	71	1716	3.1	+20 12	9.1	9.2	A3	4	..	38238i
22	1799	2.9	-11 12	9.7	9.7	Ao	1	..	2434ob	72	1620	3.1	+19 28	8.3	8.4	A5	2	..	38238i
23	1760	2.9	-22 0	9.5	9.7	Fo	2	..	12631b	73	1508	3.1	+17 7	9.0	9.1	A5	4	..	4413m
24	3880	2.9	-26 30	6.38	6.7	B3	7	..	42935b	74	1478	3.1	+15 34	9.0	10.2	K5	1	..	4413m
25	3902	2.9	-29 50	9.7	8.9	Ao	2	..	18926b	75	1534	3.1	+ 6 10	9.2	9.2	Ao	4	..	15139b
26	3667	2.9	-32 32	9.0	8.3	Ao	4	..	18926b	76	1533	3.1	+ 6 5	9.7	9.7	B8	3	..	15139b
27	3503	2.9	-33 47	9.9	10.3	Ko	1	..	2067ob	77	1813	3.1	+ 0 35	8.4	8.8	F5	2	..	37700i
28	3344	2.9	-34 12	9.9	9.7	A3	2	..	2067ob	78	1610	3.1	- 0 16	8.7	8.7	Ao	3	..	20867b
29	3343	2.9	-34 35	8.6	8.5	Ao	8	..	2067ob	79	1755	3.1	- 3 25	9.2	10.2	Ko	1	..	44407b
30	3353	2.9	-36 54	8.6	9.1	Ao	6	..	20534b	80	1978	3.1	- 5 58	9.7	9.7	B8	2	..	44407b
31	3312	2.9	-37 25	10.3	10.2	A2	2	..	2067ob	81	1880	3.1	-10 12	9.06	9.06	Ao	3	2,2	24606b
32	3313	2.9	-37 33	7.25	8.0	Ao	8	1,3	20534b	82	1879	3.1	-10 39	9.7	9.7	A	2	..	24606b
33	2799	2.9	-41 19	10.3	10.2	A2	2	..	20671b	83	1879	3.1	-10 39	9.7	9.7	A	1	..	24606b
34	2961	2.9	-42 9	8.6	8.8	F5	3	..	20671b	84	1798	3.1	-12 8	9.3	9.3	Ao	3	..	2434ob
35	2796	2.9	-47 54	9.2	10.3	Ko	2	..	38414b	85	3074	3.1	-39 9	8.6	8.7	Ao	6	..	20534b
36	2704	2.9	-48 41	9.0	9.6	Go	3	..	38414b	86	2916	3.1	-40 36	8.9	9.0	Ao	4	..	20671b
37	2605	2.9	-49 43	9.0	9.3	F5	5	..	38414b	87	2802	3.1	-41 19	9.9	9.7	B9	3	..	20671b
38	553	2.9	-72 55	8.3	9.3	Ko	6	..	20652b	88	2928	3.1	-45 6	9.34	9.7	F2	1	..	20858b
39	238	2.9	-79 16	5.51	5.51	Ao	..	2,3 R	56,123	89	2287	3.1	-51 14	9.0	9.0	F5	3	..	38414b
40	1005	3.0	+58 10	8.0	8.8	G5	4	..	37526i	90	1074	3.1	-52 27	8.0	9.6	K5	3	..	24589b
41	1539	3.0	+34 14	9.4	9.8	F5	3	..	37447i	91	1239	3.1	-56 23	9.3	9.9	G	1	..	13007b
42	1431	3.0	+30 19	7.41	8.41	Ko	4	5,3	37478i	92	694	3.1	-67 52	9.5	10.3	G5	1	..	15223b
43	1320	3.0	+28 13	8.4	8.4	Ao	4	..	38172i	93	1590	3.2	+25 25	8.6	8.7	A3	2	..	38172i
44	1506	3.0	+17 4	7.6	8.7	K2	6	2,1	4413m	94	1617	3.2	+23 49	8.4	8.7	F2	2	0,2	38172i
45	1398	3.0	+16 39	7.7	7.7	Ao	4	0,9	36977i	95	1593	3.2	+21 59	8.2	9.3	K2	2	..	38238i
46	1467	3.0	+11 5	7.05	7.11	A2	7	..	36977i	96	..	3.2	+15 58	..	..	A	1	..	4413m
47	1426	3.0	+ 9 57	8.72	9.22	F8	3	..	15139b	97	1480	3.2	+15 48	9.0	10.0	Ko	3	..	4413m
48	1608	3.0	- 0 47	8.7	8.7	Ao	7	..	20867b	98	1481	3.2	+15 41	8.4	9.5	K2	5	..	4413m
49	1609	3.0	- 0 59	9.2	9.2	Ao	4	..	20867b	99	1479	3.2	+15 10	9.7	10.5	G5	2	..	4413m
50	1830	3.0	- 4 31	7.7	8.0	Fo	6	..	38609i	100	1428	3.2	+10 11	var.	var.	Pec.	..	R	M

## THE HENRY DRAPER CATALOGUE.

54300

7h 3m.2

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1563	m. 3.2	° 3 41	8.4	8.4	Ao	3	..	37652i	51	1482	m. 3.4	° 15 36	7.8	8.4	Go	8	5,3	4413m
2	1565	3.2	+ 2 49	8.3	9.1	G5	3	..	37652i	52	1665	3.4	+ 8 3	10.0	10.0	B8	2	..	15139b
3	..	3.2	- 3 27	..	..	Ao	1	..	44407b	53	1613	3.4	+ 7 5	8.5	9.5	Ko	2	..	15139b
4	1882	3.2	-10 28	10.2	10.2	A	2	..	24606b	54	1536	3.4	+ 6 41	9.0	9.1	A2	3	..	15139b
5	1881	3.2	-11 0	10.4	10.5	A2	1	..	24606b	55	1599	3.4	+ 4 20	7.5	8.9	Ma	4	..	37652i
6	1801	3.2	-11 46	9.2	9.1	B5	4	..	24340b	56	1600	3.4	+ 3 58	9.0	9.4	F5	2	..	39867b
7	1782	3.2	-16 33	9.1	9.1	B9	2	..	15402b	57	1816	3.4	+ 0 37	8.1	8.1	Ao	7	..	37700i
8	1706	3.2	-22 49	9.7	9.2	A2	2	..	12631b	58	1817	3.4	+ 0 3	8.98	9.04	A2	2	..	20867b
9	4908	3.2	-23 41	5.75	5.6	B3p	..	2,7 R	28,199	59	1858	3.4	- 9 49	9.1	10.1	Ko	3	2,2	24606b
10	4055	3.2	-25 15	8.30	9.0	Ko	3	..	12666b	60	1884	3.4	-10 25	9.5	9.5	Ao	3	..	24606b
11	3867	3.2	-28 2	8.9	9.2	G5	4	..	24433b	61	1805	3.4	-11 46	var.	var.	Na	3	0,3 R	24340b
12	3507	3.2	-33 2	10.8	10.0	A	3	..	20670b	62	1804	3.4	-11 52	9.7	9.7	Ao	2	..	24340b
13	3347	3.2	-34 14	9.9	10.0	Ko	2	..	20670b	63	1708	3.4	-22 15	9.1	9.8	K5	1	..	12631b
14	3356	3.2	-36 31	10.3	10.3	Go	2	..	20670b	64	3942	3.4	-30 38	8.0	9.1	K2	2	..	18926b
15	2929	3.2	-45 49	7.6	8.5	K5	4	..	20858b	65	1075	3.4	-52 24	9.3	9.9	Go	2	..	24589b
16	429	3.2	-76 33	9.8	9.9	A2	3	..	20652b	66	762	3.4	-60 39	8.2	8.9	F2	5	2,4	15176b
17	207	3.2	-80 57	9.1	10.3	K5	2	..	20557b	67	591	3.4	-70 53	9.0	9.1	A2	4	..	15168b
18	913	3.3	+62 26	7.8	7.8	B9	8	..	37526i	68	1399	3.5	+50 4	7.92	8.70	G5	2	..	37515i
19	1174	3.3	+55 47	7.24	7.52	Fo	7	..	37526i	69	1699	3.5	+38 17	8.5	9.1	Go	4	..	37447i
20	1572	3.3	+36 0	9.0	10.0	Ko	1	..	37447i	70	1470	3.5	+26 40	7.7	8.7	Ko	3	..	38172i
21	1623	3.3	+19 43	7.30	8.48	K5	4	..	38238i	71	1594	3.5	+25 54	7.01	7.57	Go	5	..	38172i
22	1624	3.3	+19 12	8.1	8.9	G5	2	..	38238i	72	1524	3.5	+21 46	9.4	9.4	Ao	2	..	37472i
23	1575	3.3	+14 49	10.4	10.4	A	2	..	4413m	73	1503	3.5	+18 10	8.3	8.3	Ao	3	..	38238i
24	1576	3.3	+14 43	9.4	9.4	A	6	..	4413m	74	..	3.5	+16 27	..	..	K2	1	..	4413m
25	1468	3.3	+11 28	8.7	8.8	A5	3	..	15139b	75	..	3.5	+13 54	..	..	A	1	..	4413m
26	1598	3.3	+ 4 34	8.5	8.6	A2	4	..	37652i	76	1567	3.5	+13 19	10.0	10.5	F8	2	..	4413m
27	1565	3.3	+ 3 51	10.4	10.4	B9	1	..	39867b	77	1439	3.5	+12 20	8.7	8.7	Ao	3	E	15139b
28	1564	3.3	+ 3 23	9.4	9.4	Ao	2	..	39867b	78	1429	3.5	+10 12	8.22	9.22	Ko	4	..	15139b
29	1569	3.3	+ 2 39	9.7	9.8	A5	2	..	39867b	79	1531	3.5	+ 9 52	8.84	10.19	Ma	..	..	M
30	1815	3.3	+ 0 40	8.7	8.7	B9	3	..	37700i	80	1601	3.5	+ 4 39	9.0	10.1	K2	1	..	39687b
31	1941	3.3	- 3 2	8.4	8.4	Ao	4	1,9	38609i	81	1571	3.5	+ 2 49	8.3	9.3	Ko	2	..	37652i
32	1757	3.3	- 3 8	8.7	9.0	F2	7	..	20867b	82	1573	3.5	+ 2 30	8.5	9.1	Go	3	..	39687b
33	1981	3.3	- 5 29	9.2	9.2	B8	4	..	44407b	83	1572	3.5	+ 2 25	9.0	9.0	Ao	2	..	39867b
34	1756	3.3	- 7 52	8.9	9.5	Go	3	..	44407b	84	1706	3.5	+ 1 10	8.7	9.7	Ko	2	..	37700i
35	1803	3.3	-11 26	8.5	9.7	K5	4	..	24340b	85	1613	3.5	- 1 4	8.8	8.9	A2	4	..	20867b
36	1657	3.3	-15 33	7.25	7.81	Go	3	..	8909b	86	1886	3.5	-10 8	8.81	9.23	F5	3	3,2	24606b
37	4062	3.3	-25 26	8.5	8.3	B9	6	..	12666b	87	1885	3.5	-10 28	8.5	9.3	G5	3	..	24606b
38	4061	3.3	-25 45	9.5	8.9	F2	4	..	24433b	88	1887	3.5	-10 37	8.7	8.8	A3	4	..	20801b
39	3912	3.3	-29 23	7.42	8.3	Ma	3	..	18926b	89	1659	3.5	-15 43	9.1	9.1	Ao	3	..	15402b
40	3509	3.3	-34 1	10.3	9.4	A5	2	..	20670b	90	1784	3.5	-16 25	9.3	9.3	Ao	2	..	15402b
41	2931	3.3	-43 27	6.65	7.0	Ao	4	..	8969b	91	3897	3.5	-26 12	8.9	8.7	Fo	3	..	12666b
42	2566	3.3	-50 39	8.9	9.7	Ko	2	..	38414b	92	3877	3.5	-28 23	8.3	8.9	A2	3	..	24433b
43	1240	3.3	-53 58	7.3	9.3	B9	4	..	10697b	93	4054	3.5	-31 42	8.5	8.0	A2	5	..	18926b
44	423	3.3	-73 24	8.2	9.3	K2	8	..	20652b	94	3348	3.5	-34 15	10.8	10.0	Ao	3	..	20670b
45	424	3.3	-73 52	8.7	8.8	A3	9	..	20652b	95	3350	3.5	-35 55	9.3	10.6	G5	1	..	20670b
46	289	3.3	-77 20	10.7	10.7	A	1	..	20652b	96	2935	3.5	-43 12	9.1	9.4	Ko	2	..	20671b
47	1045	3.4	+57 42	8.0	8.4	F5	4	..	37526i	97	2905	3.5	-46 41	10.0	10.0	G5	1	..	38414b
48	1188	3.4	+56 27	8.4	8.8	F5	6	..	37526i	98	2906	3.5	-47 2	10.5	10.0	Ao	2	..	38414b
49	1563	3.4	+35 36	9.1	10.1	Ko	1	..	37447i	99	763	3.5	-61 41	9.7	9.8	A2	2	..	15176b
50	1541	3.4	+34 24	9.8	10.8	K	1	..	37447i	100	660	3.5	-64 20	8.3	8.3	Ao	7	..	15223b

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HARVARD COLLEGE OBSERVATORY,  
CAMBRIDGE, MASS., 02138

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

54400

7h 3m.6

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1484	m. 3.6	° +48 6	8.0	9.1	K2	2	E	37501i	51	366	m. 3.8	° +73 29	7.70	8.20	F8	6	..	37559i
2	1394	3.6	+45 25	7.77	8.77	Ko	5	..	37501i	52	1668	3.8	+37 34	9.4	10.2	G5	2	..	37447i
3	1595	3.6	+25 54	7.7	8.0	Fo	4	..	38172i	53	1573	3.8	+36 45	10.7	11.2	F8	1	..	37447i
4	1506	3.6	+18 44	8.1	8.1	Ao	3	..	38238i	54	1544	3.8	+34 6	10.2	10.3	A2	2	..	37447i
5	1400	3.6	+16 43	7.8	8.3	F8	8	2,3	4413m	55	1401	3.8	+16 19	9.7	9.7	Ao	5	..	4413m
6	1484	3.6	+15 48	9.7	9.7	A	4	..	4413m	56	1402	3.8	+15 56	10.0	10.0	A	3	..	4413m
7	1483	3.6	+15 46	10.4	10.4	Ao	2	..	4413m	57	1579	3.8	+14 49	10.4	10.5	A2	2	..	4413m
8	1578	3.6	+14 9	10.4	11.0	Go	3	..	4413m	58	1570	3.8	+13 49	8.5	9.6	K2	4	..	4413m
9	1568	3.6	+13 49	9.7	10.7	Ko	2	..	4413m	59	1536	3.8	+9 13	9.4	10.2	G5	1	..	15139b
10	1432	3.6	+10 21	9.08	10.08	Ko	2	..	15139b	60	1667	3.8	+8 1	9.7	9.7	Ao	2	..	15139b
11	1838	3.6	-13 6	9.2	9.3	A2	2	..	20801b	61	1537	3.8	+6 32	8.8	9.4	Go	2	..	15139b
12	4070	3.6	-25 7	8.45	8.3	Ao	5	..	12666b	62	1603	3.8	+4 47	9.00	9.00	Ao	2	..	37652i
13	3879	3.6	-28 6	8.9	8.0	A	3	R	12666b	63	1707	3.8	+1 23	9.4	9.5	A2	2	..	39867b
14	3351	3.6	-34 17	8.6	8.9	F5	5	..	20670b	64	1762	3.8	-3 54	8.6	8.6	Ao	3	..	38609i
15	3359	3.6	-36 7	10.1	10.3	Fo	2	..	20670b	65	1836	3.8	-4 58	9.3	9.3	B8	2	..	44407b
16	3322	3.6	-37 52	9.3	10.0	K2	2	..	20534b	66	1806	3.8	-12 22	8.7	9.1	F5	5	..	24340b
17	3082	3.6	-39 11	10.3	10.2	A	1	R	20670b	67	1788	3.8	-16 22	9.1	10.1	Ko	1	..	15402b
18	2808	3.6	-47 58	9.4	9.4	Go	2	..	38414b	68	1694	3.8	-18 37	9.0	9.0	Ao	3	..	20767b
19	2713	3.6	-48 23	9.0	9.6	Fo	5	..	38414b	69	1739	3.8	-20 35	9.2	9.8	G5	1	..	12631b
20	2712	3.6	-48 28	9.2	9.6	A	4	..	38414b	70	1767	3.8	-21 11	8.7	9.2	Ko	4	..	12631b
21	1134	3.6	-57 11	8.5	9.2	K2	3	..	13007b	71	3906	3.8	-26 46	9.5	9.2	Ao	2	..	24433b
22	240	3.6	-79 17	10.0	10.3	F2	3	..	20652b	72	3882	3.8	-28 50	8.3	8.6	F5	3	..	18926b
23	1058	3.7	+59 18	9.2	10.2	Ko	1	..	37526i	73	3324	3.8	-37 11	8.9	9.4	A3	3	..	20534b
24	1190	3.7	+56 15	8.8	9.2	F5	2	..	37526i	74	3323	3.8	-37 28	9.3	9.5	A3	2	..	20534b
25	1116	3.7	+54 19	8.5	8.6	A3	4	E	37526i	75	2930	3.8	-40 44	5.91	5.89	B9	..	1,4	56,123
26	1594	3.7	+44 10	9.4	9.8	F5	1	..	37501i	76	3134	3.8	-44 38	8.3	8.9	Fo	3	..	20858b
27	1596	3.7	+22 32	7.85	8.92	K2	3	2,2	38238i	77	2909	3.8	-46 40	9.6	9.7	Fo	4	..	38414b
28	1509	3.7	+17 50	8.8	8.9	A5	1	..	38238i	78	2612	3.8	-49 38	8.8	9.9	K2	3	..	38414b
29	..	3.7	+15 17	..	..	Ao	2	..	4413m	79	2295	3.8	-51 27	9.0	9.3	A	3	..	38414b
30	1577	3.7	+14 19	9.7	10.7	Ko	3	..	4413m	80	1244	3.8	-56 4	9.1	9.5	A5	3	..	13007b
31	1569	3.7	+13 47	10.0	11.0	Ko	1	..	4413m	81	209	3.8	-80 41	7.98	9.4	K5	3	..	20557b
32	..	3.7	+3 31	..	..	A2	3	..	39867b	82	1574	3.9	+36 14	9.4	10.2	G5	2	..	37447i
33	1821	3.7	+0 10	8.7	8.7	B9	4	..	37700i	83	1323	3.9	+27 14	9.0	9.0	Ao	3	..	38172i
34	1565	3.7	-1 38	8.3	9.3	Ko	3	..	20867b	84	1471	3.9	+26 22	8.6	8.6	Ao	2	..	38172i
35	1834	3.7	-5 2	10.0	10.0	Ao	1	..	44407b	85	1625	3.9	+19 27	8.3	9.3	Ko	1	..	38238i
36	1984	3.7	-5 22	9.1	9.2	A2	4	..	44407b	86	1485	3.9	+15 41	10.0	11.2	K5	1	..	4413m
37	1761	3.7	-7 23	9.2	9.2	B9	2	..	44407b	87	1434	3.9	+9 58	10.4	10.4	Ao	2	..	15139b
38	1758	3.7	-8 57	8.5	9.5	Ko	2	..	44407b	88	1537	3.9	+9 1	8.5	8.8	F2	6	..	15139b
39	1812	3.7	-11 42	8.5	8.5	B8	3	0,8	8909b	89	1576	3.9	+2 25	7.5	8.5	Ko	4	..	37652i
40	1662	3.7	-15 31	9.1	10.5	Ma	1	..	46170b	90	1945	3.9	-2 32	8.9	9.0	A2	5	..	20867b
41	1789	3.7	-17 24	9.1	9.1	Ao	3	..	15402b	91	1764	3.9	-7 18	9.3	9.3	Ao	3	..	44407b
42	1738	3.7	-20 23	9.5	9.5	Ao	1	..	12631b	92	1888	3.9	-10 9	9.2	10.2	Ko	1	..	24606b
43	1711	3.7	-22 4	9.1	9.3	Ko	2	..	12631b	93	1809	3.9	-12 43	7.00	6.98	B9	4	0,8	8909b
44	4072	3.7	-25 19	9.5	8.9	Ao	3	..	12666b	94	1808	3.9	-12 56	8.5	9.3	G5	5	0,4	24340b
45	3651	3.7	-27 53	8.9	8.4	Ao	4	0,3	12666b	95	1768	3.9	-21 6	8.9	9.2	A2	4	..	12631b
46	4058	3.7	-31 39	8.0	8.9	K5	1	..	18926b	96	3908	3.9	-26 6	8.7	8.1	Ao	4	..	12666b
47	3515	3.7	-33 13	8.9	10.2	K5	1	R	20670b	97	3959	3.9	-30 20	9.0	8.6	B9	1	..	18926b
48	3352	3.7	-34 57	9.9	10.3	F5	3	..	20670b	98	4059	3.9	-31 30	8.7	9.2	Ko	1	..	18926b
49	3177	3.7	-38 43	10.6	10.2	A2	2	..	20670b	99	4061	3.9	-31 37	10.0	9.2	A	1	..	18926b
50	648	3.7	-66 18	9.7	11.1	Mb	..	..	M	100	3687	3.9	-32 14	8.3	8.8	Ko	2	..	18926b

## THE HENRY DRAPER CATALOGUE.

54500

7<sup>h</sup> 3<sup>m</sup>.9

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	3355	m. 3.9	° -34 28	9.9	9.1	B <sub>9</sub>	5	..	2067ob	51	4932	m. 4.1	° -23 15	9.2	8.6	B <sub>5</sub>	4	..	20767b
2	3357	3.9	-35 43	8.6	9.4	F <sub>5</sub>	2	..	20534b	52	4906	4.1	-24 4	9.2	8.6	F <sub>0</sub>	4	..	12631b
3	2932	3.9	-40 23	7.9	9.3	K <sub>2</sub>	4	..	20671b	53	4085	4.1	-25 14	10.2	8.9	A <sub>0</sub>	1	..	12666b
4	3135	3.9	-44 53	8.40	8.6	F <sub>0</sub>	4	..	20858b	54	3892	4.1	-28 3	9.0	8.3	A <sub>0</sub>	4	0,4	12666b
5	2716	3.9	-48 5	9.2	9.3	G <sub>0</sub>	6	..	38414b	55	3888	4.1	-28 25	8.1	8.1	B <sub>8</sub>	5	..	18926b
6	766	3.9	-59 14	8.6	10.0	K <sub>0</sub>	2	..	13007b	56	3359	4.1	-35 14	8.6	9.4	A <sub>2</sub>	3	..	20534b
7	765	3.9	-61 4	8.2	9.4	K <sub>0</sub>	2	..	18486b	57	3362	4.1	-36 37	10.6	10.9	F <sub>8</sub>	1	..	2067ob
8	291	4.0	+75 22	8.32	8.60	F <sub>0</sub>	4	..	37559i	58	593	4.1	-70 23	8.4	8.4	A <sub>0</sub>	8	..	15168b
9	1047	4.0	+57 49	9.0	9.4	F <sub>5</sub>	2	..	37526i	59	427	4.1	-73 6	9.2	10.2	K <sub>0</sub>	2	..	20652b
10	1718	4.0	+20 38	9.4	9.4	A	1	..	38238i	60	1670	4.2	+37 28	8.6	9.6	K <sub>0</sub>	4	..	37447i
11	1629	4.0	+19 0	7.7	7.7	A <sub>0</sub>	6	..	37472i	61	1482	4.2	+33 31	9.0	9.5	F <sub>8</sub>	4	..	37447i
12	1403	4.0	+16 22	9.7	10.7	K <sub>0</sub>	3	..	4413m	62	1491	4.2	+32 47	7.20	8.20	K <sub>0</sub>	5	E	37527i
13	1538	4.0	+6 36	8.1	8.1	B <sub>9</sub>	2	..	37652i	63	1528	4.2	+21 25	6.46	7.24	G <sub>5</sub>	6	0,6 R	37472i
14	1841	4.0	-13 32	9.1	9.1	A <sub>0</sub>	3	..	20801b	64	1405	4.2	+16 30	10.4	11.5	K <sub>2</sub>	1	..	4413m
15	1842	4.0	-13 50	8.5	8.6	A <sub>2</sub>	4	..	2434ob	65	1572	4.2	+13 18	7.22	8.22	K <sub>0</sub>	7	0,4	4413m
16	1663	4.0	-15 57	9.1	9.1	A <sub>0</sub>	2	..	15402b	66	1571	4.2	+13 8	8.5	9.5	K <sub>0</sub>	4	..	4413m
17	1792	4.0	-17 24	8.7	9.9	K <sub>5</sub>	1	..	15402b	67	1669	4.2	+8 46	8.4	9.2	G <sub>5</sub>	3	..	15139b
18	1696	4.0	-18 52	8.5	9.7	K <sub>5</sub>	1	..	15402b	68	1616	4.2	+7 1	7.7	7.8	A <sub>3</sub>	3	..	37652i
19	1740	4.0	-20 42	6.87	8.6	K <sub>2</sub>	7	0,2	12631b	69	1578	4.2	+2 54	9.0	9.8	G <sub>5</sub>	2	..	39867b
20	1712	4.0	-22 17	9.1	8.9	A <sub>0</sub>	5	..	12631b	70	1838	4.2	-4 46	9.1	9.1	A <sub>0</sub>	2	..	38609i
21	3660	4.0	-27 36	8.5	8.3	G <sub>0</sub>	4	5,3	12666b	71	1945	4.2	-6 54	9.7	9.7	A <sub>0</sub>	1	..	44407b
22	3926	4.0	-29 16	7.9	8.5	K <sub>2</sub>	3	..	18926b	72	1946	4.2	-6 56	9.7	9.7	B <sub>9</sub>	1	..	44407b
23	3688	4.0	-32 18	9.3	9.4	A <sub>0</sub>	2	..	18926b	73	1768	4.2	-7 47	8.3	8.3	A <sub>0</sub>	2	..	38609i
24	3357	4.0	-34 2	10.3	10.0	K <sub>0</sub>	2	..	2067ob	74	1816	4.2	-11 20	9.2	9.2	B <sub>8</sub>	4	..	2434ob
25	3182	4.0	-38 18	9.3	9.7	K <sub>0</sub>	3	..	20534b	75	1664	4.2	-15 46	8.3	8.2	B <sub>5</sub>	3	..	15402b
26	2934	4.0	-40 57	9.9	9.9	K <sub>0</sub>	2	..	20671b	76	1798	4.2	-17 28	9.1	9.1	B <sub>9</sub>	4	..	15402b
27	2816	4.0	-41 49	9.2	9.7	K <sub>0</sub>	2	..	20671b	77	4937	4.2	-23 55	8.3	8.3	A <sub>0</sub>	6	..	20767b
28	2939	4.0	-45 18	9.4	9.4	F <sub>0</sub>	2	..	20858b	78	3914	4.2	-26 48	10.7	9.2	A	2	..	24433b
29	767	4.0	-60 0	8.12	8.2	A <sub>0</sub>	5	..	18486b	79	3360	4.2	-34 41	7.9	8.5	G <sub>0</sub>	8	..	2067ob
30	207	4.0	-81 58	9.6	10.0	F <sub>5</sub>	1	..	20557b	80	3358	4.2	-34 47	8.9	9.7	K <sub>0</sub>	2	..	2067ob
31	1653	4.1	+42 57	9.2	9.3	A <sub>3</sub>	2	..	37501i	81	3361	4.2	-35 39	7.50	8.5	K <sub>0</sub>	6	..	20534b
32	1576	4.1	+36 46	9.4	10.4	K <sub>0</sub>	2	..	37447i	82	3360	4.2	-35 48	9.3	9.4	F <sub>2</sub>	2	..	20534b
33	1575	4.1	+36 43	9.8	10.8	K	1	..	37447i	83	3184	4.2	-38 37	9.9	10.2	K <sub>0</sub>	2	..	2067ob
34	1490	4.1	+32 8	8.7	9.9	K <sub>5</sub>	1	..	37447i	84	1137	4.2	-57 50	9.1	9.2	A <sub>0</sub>	3	..	13007b
35	1436	4.1	+30 31	8.1	8.2	A <sub>2</sub>	3	..	38172i	85	681	4.2	-63 7	10.1	10.2	A <sub>2</sub>	2	..	15176b
36	1404	4.1	+16 48	10.4	10.4	A	2	..	4413m	86	292	4.3	+75 46	9.12	10.12	K <sub>0</sub>	2	..	38187i
37	1538	4.1	+9 14	8.3	9.4	K <sub>2</sub>	2	..	15139b	87	413	4.3	+68 58	7.6	9.0	Mb	4	0,3	38155i
38	1668	4.1	+7 58	9.4	9.4	B <sub>8</sub>	3	..	15139b	88	944	4.3	+61 11	8.8	10.2	Ma	1	..	37526i
39	1539	4.1	+6 5	8.8	9.1	F <sub>0</sub>	4	..	15139b	89	1048	4.3	+57 10	9.4	10.0	G	1	..	37526i
40	1711	4.1	+1 52	8.7	9.1	F <sub>5</sub>	2	..	37652i	90	1401	4.3	+49 57	6.89	8.24	Ma	5	..	37515i
41	1949	4.1	-3 0	8.9	8.9	A <sub>0</sub>	2	..	38609i	91	1803	4.3	+40 13	7.27	7.69	F <sub>5</sub>	7	..	37501i
42	1761	4.1	-8 31	8.3	..	K	1	R	44407b	92	1492	4.3	+32 23	7.65	8.43	G <sub>5</sub>	4	E	37527i
43	1761	4.1	-8 31	8.3	..	A <sub>0</sub>	3	..	44407b	93	1510	4.3	+16 58	9.7	10.3	G <sub>0</sub>	2	..	4413m
44	1889	4.1	-11 1	9.1	9.1	A <sub>0</sub>	3	..	2434ob	94	1607	4.3	+4 6	9.7	9.7	A <sub>0</sub>	2	..	39867b
45	1795	4.1	-17 30	9.1	9.1	B <sub>9</sub>	4	..	15402b	95	1573	4.3	+3 32	9.0	9.0	A <sub>0</sub>	4	..	37652i
46	1796	4.1	-17 50	8.7	8.7	B <sub>9</sub>	5	..	15402b	96	1579	4.3	+2 5	7.8	7.7	B <sub>5</sub>	7	..	37652i
47	1698	4.1	-18 26	7.9	9.1	K <sub>5</sub>	3	..	20767b	97	1766	4.3	-3 12	8.9	9.2	F <sub>0</sub>	3	..	44407b
48	1770	4.1	-21 50	8.5	8.9	A <sub>3</sub>	6	..	12631b	98	1947	4.3	-6 18	9.1	9.2	A <sub>2</sub>	4	..	44407b
49	1714	4.1	-22 15	9.1	8.7	A <sub>2</sub>	5	..	12631b	99	1770	4.3	-7 36	8.5	8.5	A <sub>0</sub>	2	..	38609i
50	1713	4.1	-22 39	9.0	9.2	K <sub>0</sub>	2	..	12631b	100	1890	4.3	-10 6	8.71	8.71	A <sub>0</sub>	4	..	24606b



## ANNALS OF HARVARD COLLEGE OBSERVATORY.

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7<sup>h</sup> 4<sup>m</sup>.3

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1813	m. 4.3	° -12 10	9.0	9.0	Ao	4	..	24340b	51	1566	m. 4.6	° +35 49	9.4	10.4	Ko	1	..	37447i
2	1701	4.3	-18 6	8.5	8.5	B9	4	..	20767b	52	1597	4.6	+25 12	9.4	10.4	K	1	..	38172i
3	1705	4.3	-19 10	8.9	9.2	Ao	2	..	20767b	53	1406	4.6	+16 32	10.4	10.7	F2	2	..	4413m
4	1715	4.3	-23 0	9.1	8.6	B9	3	..	20767b	54	1487	4.6	+15 46	9.4	9.5	A3	6	2,2 R	4413m
5	3916	4.3	-26 14	1.98	2.48	F8p	..	R	28,199	55	1486	4.6	+15 3	10.0	10.1	A2	6	..	4413m
6	3188	4.3	-38 18	9.5	9.4	A5	5	..	20534b	56	1542	4.6	+ 9 4	8.8	9.3	F8	3	..	15139b
7	3087	4.3	-39 5	10.3	10.2	Ko	2	..	20670b	57	1674	4.6	+ 8 2	8.2	9.0	G5	5	..	15139b
8	2812	4.3	-47 42	10.5	10.3	G5	1	..	38414b	58	1993	4.6	- 5 53	7.8	8.1	Fo	6	..	38609i
9	2300	4.3	-51 8	8.6	9.6	Ko	3	0,2	24589b	59	1951	4.6	- 6 53	9.2	9.3	A2	4	..	44407b
10	1079	4.3	-52 27	8.6	8.7	Ao	5	..	24589b	60	1762	4.6	- 8 7	7.36	8.14	G5	3	..	38609i
11	1246	4.3	-53 44	8.6	9.5	Ko	1	..	10697b	61	1763	4.6	- 9 2	8.9	9.5	Go	1	..	44407b
12	766	4.3	-61 15	7.9	9.1	Ko	3	..	18486b	62	1892	4.6	-10 11	6.20	..	Oe5	6	R	38609i
13	1236	4.4	+46 10	9.0	9.1	A5	3	..	37501i	63	1893	4.6	-10 23	10.0	10.0	A	1	..	24606b
14	1396	4.4	+45 12	8.9	9.3	F5	3	..	37501i	64	1894	4.6	-10 30	9.0	9.0	B9	3	..	20801b
15	1704	4.4	+38 22	7.9	8.9	Ko	4	..	37447i	65	1734	4.6	-14 16	8.7	9.5	G5	5	..	24606b
16	1546	4.4	+24 16	7.8	8.2	F5	3	0,3	38172i	66	1666	4.6	-16 0	9.1	9.1	Ao	3	..	15402b
17	1723	4.4	+20 9	8.6	8.9	Fo	2	..	38238i	67	1709	4.6	-19 21	9.1	9.2	Ao	2	..	20767b
18	1581	4.4	+14 0	9.4	9.4	Ao	5	..	4413m	68	1719	4.6	-22 33	9.1	8.7	B9	3	..	20767b
19	1539	4.4	+ 9 28	6.90	7.97	K2	4	..	38971i	69	4949	4.6	-23 53	6.47	6.9	B3	..	0,5	28,199
20	1560	4.4	+ 5 36	9.4	9.4	Ao	4	..	15139b	70	4099	4.6	-25 27	7.9	8.1	Ao	3	..	42935b
21	1843	4.4	-13 36	9.7	10.7	Ko	1	..	24606b	71	3925	4.6	-26 35	8.3	8.9	Ko	2	..	12666b
22	1732	4.4	-14 48	8.6	8.6	Ao	3	..	15402b	72	3903	4.6	-28 27	7.41	8.0	F8	7	..	18926b
23	1793	4.4	-16 21	9.0	9.0	Ao	3	..	15402b	73	3524	4.6	-33 33	8.9	8.6	Ao	6	..	20670b
24	1702	4.4	-18 32	10.6	10.6	Ao	2	..	15402b	74	3368	4.6	-36 54	8.3	8.5	A3	6	..	20534b
25	1707	4.4	-19 23	9.3	9.2	B9	2	..	20767b	75	3192	4.6	-38 54	10.3	10.4	K2	2	..	20670b
26	4074	4.4	-31 16	6.98	7.6	F5	4	..	8905b	76	2942	4.6	-40 17	8.9	8.7	B9	7	..	20671b
27	2918	4.4	-46 27	8.8	9.1	G5	4	0,2	38414b	77	2950	4.6	-43 16	9.8	9.4	F2	2	..	20671b
28	2577	4.4	-50 28	8.6	8.5	A2	6	..	38414b	78	2952	4.6	-43 49	7.6	8.5	A2	5	..	20858b
29	243	4.4	-79 1	9.0	9.1	A2	7	..	20652b	79	2303	4.6	-51 29	9.6	9.6	F	2	..	24589b
30	1444	4.5	+12 43	8.5	8.5	A	2	E	15139b	80	1081	4.6	-52 19	8.8	9.0	A2	4	..	24589b
31	1541	4.5	+ 9 51	8.87	9.43	Go	3	..	15139b	81	1249	4.6	-56 29	8.4	9.2	F8	3	..	13007b
32	1618	4.5	+ 7 53	6.78	7.85	K2	5	..	37652i	82	687	4.6	-69 32	10.4	10.4	Ao	3	..	15223b
33	1713	4.5	+ 1 32	9.0	9.1	A5	2	..	37700i	83	420	4.6	-75 28	9.2	10.4	K5	4	..	20652b
34	1623	4.5	- 1 0	9.4	10.2	G5	2	..	39867b	84	441	4.7	+70 41	7.8	8.6	G5	5	..	37559i
35	1571	4.5	- 1 12	8.4	9.6	K5	2	..	39867b	85	1035	4.7	+60 17	8.9	9.5	Go	3	..	37526i
36	1949	4.5	- 7 4	10.0	10.0	Ao	1	..	44407b	86	1049	4.7	+57 1	8.0	8.1	A2	6	..	37526i
37	1801	4.5	-18 1	7.7	8.5	G5	6	..	20767b	87	1656	4.7	+43 25	8.8	8.8	Ao	2	..	37501i
38	1703	4.5	-18 21	9.1	9.1	Ao	2	..	15402b	88	1549	4.7	+33 56	8.6	8.7	A2	3	..	37447i
39	1708	4.5	-19 46	8.1	9.0	K2	2	..	20767b	89	1495	4.7	+32 19	8.8	8.8	Ao	2	..	37447i
40	1717	4.5	-22 55	9.2	8.9	Ao	2	..	20767b	90	1724	4.7	+20 37	9.5	10.3	G5	1	..	38238i
41	4947	4.5	-23 37	8.9	8.0	B8	5	1,2 R	20767b	91	1725	4.7	+19 58	7.85	8.27	F5	4	E	37472i
42	3920	4.5	-26 48	9.5	9.0	A	3	..	24433b	92	1635	4.7	+19 30	8.3	8.3	Ao	3	..	38238i
43	3523	4.5	-33 12	7.9	7.6	A3	7	..	18926b	93	1407	4.7	+16 7	10.4	10.5	A2	2	..	4413m
44	2980	4.5	-42 9	9.2	9.9	K2	3	..	20671b	94	1488	4.7	+15 36	10.4	10.5	A2	3	..	4413m
45	2948	4.5	-43 42	8.4	8.3	A2	4	..	20858b	95	1620	4.7	+ 7 30	8.4	8.5	A2	6	..	15139b
46	2919	4.5	-46 32	9.6	10.3	K	1	..	38414b	96	1619	4.7	+ 7 15	9.0	10.1	K2	1	..	15139b
47	1138	4.5	-57 5	9.8	9.8	Ao	3	..	13007b	97	1541	4.7	+ 6 21	9.4	9.4	A	2	..	15139b
48	693	4.6	+63 7	9.4	9.4	Ao	2	E	37526i	98	1542	4.7	+ 6 16	8.8	8.8	B9	4	..	15139b
49	1191	4.6	+55 58	7.7	8.7	Ko	4	..	37526i	99	1581	4.7	+ 2 55	9.0	9.8	G5	2	..	39867b
50	1600	4.6	+49 22	8.6	9.2	Go	2	..	37515i	100	1994	4.7	- 5 31	9.1	10.3	K5	1	..	44407b

## THE HENRY DRAPER CATALOGUE.

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7<sup>h</sup> 4<sup>m</sup>.7

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1995	4.7	- 5 42	9.3	9.3	Ao	3	..	44407b	51	2823	4.9	-47 48	10.2	10.0	F5	1	..	38414b
2	1766	4.7	- 8 59	9.7	9.7	Ao	1	..	44407b	52	2626	4.9	-49 19	10.9	10.5	A	2	..	38414b
3	1844	4.7	-13 10	9.7	10.7	Ko	1	..	24606b	53	663	4.9	-64 7	9.9	9.9	Ao	2	..	15176b
4	1846	4.7	-13 46	9.3	9.3	A	2	E	24606b	54	518	4.9	-71 31	9.9	10.0	A3	2	..	15168b
5	1845	4.7	-13 58	10.4	10.4	A	2	E	24606b	55	430	4.9	-77 0	9.8	9.9	A5	4	..	20652b
6	1704	4.7	-18 12	9.2	10.3	K2	2	..	15402b	56	1550	5.0	+34 22	9.1	10.1	Ko	2	..	37447i
7	3905	4.7	-28 12	9.5	8.9	Ao	2	..	12666b	57	1598	5.0	+25 29	8.6	8.6	Ao	2	..	38172i
8	3526	4.7	-33 31	10.8	9.4	Ao	2	..	20670b	58	1547	5.0	+ 6 28	9.0	9.0	B8	3	..	37652i
9	3365	4.7	-35 23	9.5	9.5	Ao	2	..	20534b	59	1566	5.0	+ 5 28	9.2	9.7	F8	2	..	15139b
10	3093	4.7	-39 7	9.3	9.6	Ko	4	..	20574b	60	1612	5.0	+ 4 3	9.0	10.2	K5	1	..	39867b
11	2305	4.7	-51 28	9.4	9.0	A3	3	..	24589b	61	1997	5.0	- 5 35	8.1	8.1	B9	3	..	38609i
12	1190	4.7	-54 51	8.2	9.2	Ko	3	..	13007b	62	1819	5.0	-11 55	9.5	9.5	B9	2	1,1	24606b
13	1140	4.7	-57 37	7.0	8.0	A3	7	..	13007b	63	1671	5.0	-15 5	7.04	7.10	A2	6	..	8909b
14	480	4.8	+67 49	8.9	9.7	G5	3	..	37545i	64	1802	5.0	-16 4	6.03	5.86	B3	..	0,8	56,83
15	1598	4.8	+44 0	6.82	6.82	Ao	9	..	3750ri	65	1801	5.0	-16 46	9.1	9.1	Ao	4	..	15402b
16	1882	4.8	+39 29	5.07	6.14	K2	10	E	3750ri	66	1805	5.0	-17 58	10.4	10.4	B9	2	..	15402b
17	1486	4.8	+33 17	7.14	7.56	F5	6	E	37527i	67	1713	5.0	-19 24	9.7	9.7	Ao	1	..	15402b
18	1497	4.8	+32 47	8.2	8.8	Go	4	E	37527i	68	1749	5.0	-20 41	8.7	8.6	B8	4	..	20767b
19	1439	4.8	+30 25	4.48	5.48	Ko	..	0, R	56,83	69	4921	5.0	-24 18	10.2	8.9	A2	3	2,2	20767b
20	1470	4.8	+29 52	8.81	8.89	A3	1	..	38172i	70	4923	5.0	-25 1	8.98	8.3	Ao	4	..	12666b
21	1490	4.8	+15 54	9.7	10.7	Ko	2	..	4413m	71	3683	5.0	-27 59	8.3	7.0	B8	3	..	8905b
22	1489	4.8	+15 43	10.0	10.1	A2	3	..	4413m	72	3532	5.0	-33 54	8.9	8.2	Ao	7	..	20670b
23	..	4.8	+15 19	..	..	Ko	1	..	4413m	73	3376	5.0	-36 3	8.6	9.7	Fo	2	..	20534b
24	1574	4.8	+13 31	8.5	8.5	Ao	7	0,3	4413m	74	3200	5.0	-38 47	10.8	10.2	F2	1	..	20534b
25	1438	4.8	+10 54	9.0	10.1	K2	1	..	15139b	75	1007	5.1	+58 7	8.9	9.0	A2	4	..	37526i
26	1955	4.8	- 6 59	8.7	9.7	Ko	2	..	44407b	76	1119	5.1	+54 38	7.00	7.06	A2	10	..	37526i
27	1814	4.8	-12 23	10.4	10.2	B	2	..	24606b	77	1442	5.1	+30 38	7.8	8.1	F2	5	..	38172i
28	1669	4.8	-15 32	9.2	10.0	G5	2	..	15402b	78	1408	5.1	+16 45	9.0	9.0	Ao	7	..	4413m
29	3948	4.8	-29 50	8.9	8.5	Go	2	..	18926b	79	1548	5.1	+ 6 15	8.1	8.1	Ao	5	..	37652i
30	3367	4.8	-35 8	10.8	10.2	Ao	3	..	20670b	80	..	5.1	- 0 25	..	..	Ao	1	..	39867b
31	3336	4.8	-37 12	8.6	8.8	A2	6	..	20534b	81	1627	5.1	- 0 31	8.1	8.1	Ao	3	..	37700i
32	2306	4.8	-51 48	5.98	6.9	G5	..	0,7	56,123	82	1574	5.1	- 1 42	8.5	8.5	Ao	5	..	39867b
33	587	4.8	-68 5	8.9	10.0	K2	1	..	15223b	83	1769	5.1	- 8 10	8.7	9.5	G5	4	..	44407b
34	1583	4.9	+14 0	9.7	10.7	Ko	2	..	4413m	84	1768	5.1	- 9 1	9.0	9.0	B8	2	..	44407b
35	1439	4.9	+10 16	8.8	8.9	A5	4	..	15139b	85	1738	5.1	-14 37	9.0	9.1	A2	2	..	15402b
36	1676	4.9	+ 8 17	8.3	9.5	K5	3	..	15139b	86	1672	5.1	-15 56	9.2	9.0	B	2	..	15402b
37	1543	4.9	+ 6 37	9.4	9.5	A3	1	..	15139b	87	1723	5.1	-22 20	9.0	8.9	B8	3	..	20767b
38	1577	4.9	+ 3 5	10.0	10.0	Ao	3	..	39687b	88	1721	5.1	-22 36	9.1	9.0	A3	3	..	20767b
39	1625	4.9	- 0 34	9.4	10.5	K2	1	..	39867b	89	3684	5.1	-27 12	9.3	8.7	Ao	3	..	12666b
40	1897	4.9	-10 52	8.9	8.9	B8	2	..	20801b	90	3372	5.1	-34 40	9.7	10.2	G5	3	..	20670b
41	1818	4.9	-11 58	10.6	10.7	A2	2	..	24606b	91	2833	5.1	-41 45	9.3	9.9	Ko	2	..	20671b
42	..	4.9	-12 30	..	..	Ao	1	..	24606b	92	1084	5.1	-52 3	6.52	7.8	Ko	4	..	10697b
43	1815	4.9	-13 1	9.1	9.9	G5	2	..	24606b	93	1193	5.1	-54 25	8.3	9.5	K5	3	..	13007b
44	3680	4.9	-27 19	8.3	8.7	Ko	3	..	12666b	94	1156	5.1	-55 37	9.0	9.8	G5	1	..	13007b
45	3909	4.9	-28 51	8.3	8.9	Ko	3	..	18926b	95	848	5.1	-58 13	var.	var.	Mc	2	R	13007b
46	3699	4.9	-32 50	8.3	8.3	F2	5	..	18926b	96	764	5.1	-62 57	9.6	9.9	Fo	2	..	15176b
47	3369	4.9	-34 59	9.9	10.3	Go	3	..	20670b	97	519	5.1	-71 50	8.5	8.8	F2	5	..	15168b
48	3197	4.9	-38 27	11.3	10.2	A3	1	..	20534b	98	293	5.2	+75 29	9.7	10.0	Fo	1	..	38787i
49	3198	4.9	-38 35	9.7	10.1	Ko	2	..	20534b	99	354	5.2	+72 40	9.2	9.6	F5	1	..	37559i
50	2945	4.9	-40 35	9.2	9.4	F8	3	..	20671b	100	1505	5.2	+31 32	8.2	8.3	A2	4	E	37527i

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

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7<sup>h</sup> 5<sup>m</sup>.2

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1327	5.2	+27 2	5.60	5.66	A2	10	..	38172i	51	1550	5.4	+9 33	7.49	7.47	B9	6	..	38971b
2	1549	5.2	+24 50	8.21	9.56	Ma	1	..	38172i	52	1568	5.4	+5 54	8.3	8.8	F8	4	..	37652i
3	1514	5.2	+17 0	10.4	11.0	G	1	..	4413m	53	1584	5.4	+2 39	8.7	9.1	F5	2	..	37652i
4	1584	5.2	+14 13	9.4	10.4	Ko	3	..	4413m	54	1833	5.4	+0 0	7.78	8.78	Ko	2	..	37700i
5	1547	5.2	+8 57	7.8	7.8	B9	7	..	15139b	55	1773	5.4	-3 56	9.1	9.1	B9	4	..	44407b
6	1549	5.2	+6 0	8.4	8.9	F8	4	2,2	15139b	56	1841	5.4	-4 13	8.1	9.1	Ko	1	..	38609i
7	1719	5.2	+1 49	8.7	9.3	Go	2	..	37652i	57	1881	5.4	-9 9	7.9	8.0	A2	6	2,3	20801b
8	1832	5.2	+0 26	8.3	8.7	F5	2	..	37700i	58	1880	5.4	-9 11	8.4	8.4	Ao	5	2,2	20801b
9	1628	5.2	-0 42	9.4	9.5	A2	2	..	39867b	59	1851	5.4	-13 28	7.26	8.26	Ko	5	..	20801b
10	1840	5.2	-4 5	5.02	6.02	Ko	8	..	38609i	60	1677	5.4	-16 0	9.1	9.1	Ao	3	..	15402b
11	1771	5.2	-8 27	10.4	10.4	Ao	1	..	44407b	61	1809	5.4	-17 32	9.1	10.2	K2	1	..	15402b
12	1878	5.2	-10 2	9.3	10.3	Ko	1	..	24606b	62	4931	5.4	-24 9	8.0	9.3	K5	2	0,1	20767b
13	1816	5.2	-12 55	9.1	9.1	Ao	2	..	20801b	63	3377	5.4	-34 44	9.7	10.7	K2	2	..	20670b
14	1705	5.2	-18 57	7.68	7.63	B8	3	1,2-	8909b	64	3378	5.4	-35 0	9.65	9.7	Fo	5	..	20670b
15	1714	5.2	-20 2	9.2	9.5	K2	1	..	15402b	65	3341	5.4	-37 41	9.7	9.5	F5	2	..	20534b
16	3687	5.2	-27 11	8.9	8.3	B9	4	..	12666b	66	2962	5.4	-43 6	9.6	10.0	G5	1	..	20671b
17	3103	5.2	-39 3	9.9	10.4	K5	1	..	20670b	67	2929	5.4	-46 58	9.8	10.0	K2	1	..	38414b
18	2732	5.2	-48 34	9.6	9.6	Ao	5	..	38414b	68	773	5.4	-61 18	8.7	9.4	F5	3	..	18486b
19	770	5.2	-59 50	8.07	8.2	A2	6	..	18486b	69	624	5.5	+64 23	9.9	10.5	G	2	..	37545i
20	1008	5.3	+58 25	8.7	9.1	F5	3	..	37526i	70	1807	5.5	+40 11	8.2	9.4	K5	1	..	37501i
21	1398	5.3	+45 18	9.2	10.2	Ko	1	..	37501i	71	1727	5.5	+20 26	8.0	8.8	G5	3	..	37472i
22	1599	5.3	+44 11	7.8	9.0	K5	2	..	37501i	72	1585	5.5	+14 29	10.0	11.1	K2	1	..	4413m
23	1569	5.3	+35 24	8.7	9.5	G5	2	..	37447i	73	1625	5.5	+7 18	9.4	9.4	Ao	4	..	15139b
24	1570	5.3	+35 9	8.6	8.7	A2	6	..	37447i	74	1575	5.5	-1 35	10.0	10.0	Ao	2	..	39867b
25	1481	5.3	+26 34	6.75	7.75	Ko	4	..	38172i	75	1965	5.5	-6 53	9.0	9.0	B8	2	..	44407b
26	1492	5.3	+14 58	10.4	10.4	Ao	1	..	4413m	76	1773	5.5	-8 34	10.0	10.0	B9	1	..	44407b
27	1548	5.3	+9 24	9.4	9.4	Ao	2	..	15139b	77	1774	5.5	-8 44	10.0	10.0	Ao	1	..	44407b
28	1549	5.3	+9 14	8.3	9.1	G5	4	..	15139b	78	1900	5.5	-10 57	7.9	9.1	K5	3	..	20801b
29	1579	5.3	+3 8	8.3	8.6	Fo	2	..	37652i	79	1822	5.5	-11 39	7.9	7.7	B3	7	5,3	20801b
30	1998	5.3	-5 39	9.2	9.2	Ao	2	..	44407b	80	1823	5.5	-11 56	10.4	10.4	Ao	2	..	24606b
31	1962	5.3	-6 7	9.1	9.5	F5	2	R	44407b	81	1819	5.5	-12 6	9.5	9.6	A5	4	..	24606b
32	1958	5.3	-7 4	8.5	8.5	B9	2	..	38609i	82	1818	5.5	-12 17	10.0	10.3	Fo	4	..	24606b
33	1850	5.3	-13 59	9.2	9.2	Ao	5	..	24606b	83	1852	5.5	-13 26	8.9	8.9	Ao	4	..	24606b
34	1676	5.3	-16 4	6.70	6.84	A5	6	5,6-	8909b	84	1811	5.5	-17 43	9.1	9.1	B9	3	..	15402b
35	1781	5.3	-21 18	8.9	8.7	Fo	5	..	12631b	85	1754	5.5	-20 31	8.9	8.9	Ao	3	..	20767b
36	4929	5.3	-24 2	10.4	9.3	Ao	1	..	20767b	86	1728	5.5	-22 7	9.1	9.2	Fo	3	..	12631b
37	3957	5.3	-29 51	9.3	8.3	B9	4	..	18926b	87	1729	5.5	-22 51	8.7	8.9	G5	1	..	20767b
38	3989	5.3	-30 47	8.9	8.0	Ao	5	..	18926b	88	4983	5.5	-23 33	10.9	9.5	A2	2	..	12631b
39	4099	5.3	-31 46	7.5	7.5	B8	5	0,3	8905b	89	4982	5.5	-23 46	8.9	8.0	Ao	2	..	42935b
40	3706	5.3	-32 44	7.60	8.5	K2	5	..	18926b	90	4104	5.5	-31 19	10.2	8.3	Ao	5	..	18926b
41	3337	5.3	-37 52	9.2	9.5	Go	2	..	20534b	91	3539	5.5	-33 30	10.6	8.9	Ao	4	..	20670b
42	3202	5.3	-38 29	8.9	10.1	K5	2	..	20670b	92	3371	5.5	-35 20	10.3	10.3	F5	2	..	20670b
43	2733	5.3	-48 45	8.6	9.6	G5	5	..	38414b	93	3105	5.5	-39 29	4.85	4.68	B3	..	0,9 R	28,199
44	683	5.3	-63 55	9.5	9.5	Ao	4	..	15176b	94	694	5.6	+63 2	9.5	9.5	Ao	3	E	37526i
45	559	5.3	-72 36	9.4	9.7	Fo	2	..	20652b	95	1295	5.6	+51 36	5.69	7.04	Ma	8	..	37515i
46	388	5.4	+71 44	9.0	9.1	A2	2	..	37559i	96	1582	5.6	+36 18	7.8	7.9	A2	7	..	37447i
47	1331	5.4	+28 22	9.5	10.9	Ma	..	..	M	97	1506	5.6	+31 39	8.8	9.9	K2	3	..	37447i
48	1493	5.4	+15 54	9.4	10.4	Ko	2	..	4413m	98	1634	5.6	+23 24	8.6	8.6	Ao	3	..	38238i
49	1586	5.4	+13 57	9.7	10.7	Ko	6	5,2	4413m	99	1539	5.6	+21 54	9.8	9.8	Ao	2	..	38238i
50	1575	5.4	+13 11	10.4	11.4	Ko	1	..	4413m	100	1410	5.6	+16 12	10.4	10.5	A2	3	..	4413m

THE HENRY DRAPER CATALOGUE.

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7<sup>h</sup> 5<sup>m</sup>.6

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1494	5.6	+15 30	7.26	7.54	Fo	5	5,9	36977i	51	1582	5.8	+ 3 37	9.7	10.5	G5	1	..	39867b
2	1577	5.6	+13 32	8.8	9.1	F2	6	0,3-	4413m	52	1583	5.8	+ 3 1	9.0	9.3	F2	2	..	39867b
3	1576	5.6	+13 27	10.4	10.5	A2	1	E	4413m	53	1838	5.8	+ 0 25	9.4	9.7	Fo	1	..	39867b
4	1615	5.6	+ 4 6	9.7	9.8	A2	2	..	37652i	54	..	5.8	-11 5	..	..	A2	1	..	24606b
5	1835	5.6	+ 0 43	9.7	9.7	B9	2	..	39867b	55	1855	5.8	-13 24	9.5	9.5	Ao	3	..	24606b
6	1836	5.6	+ 0 3	8.88	9.16	Fo	2	..	39867b	56	1744	5.8	-14 36	8.3	8.4	A2	6	..	15402b
7	1578	5.6	- 1 7	9.7	9.7	Ao	3	..	39867b	57	1713	5.8	-18 23	7.9	8.9	Ko	4	..	20767b
8	1579	5.6	- 1 40	7.9	7.9	Ao	7	..	39867b	58	1711	5.8	-18 31	6.18	6.46	Fo	6	5,9	8903b
9	1777	5.6	- 3 53	9.5	9.8	Fo	1	..	44407b	59	1714	5.8	-19 2	7.28	7.7	A5	6	3,2-	46170b
10	1853	5.6	-13 26	9.3	9.4	A3	3	..	24606b	60	1722	5.8	-19 26	9.1	9.2	Fo	2	..	20767b
11	1681	5.6	-15 31	7.03	6.91	B5	6	..	8909b	61	1721	5.8	-19 36	8.7	8.4	Ao	4	..	20767b
12	4120	5.6	-25 4	5.76	5.3	B3	..	0,7	56,83	62	4945	5.8	-24 14	9.7	8.6	Ao	2	2,2	20767b
13	3925	5.6	-28 17	8.7	7.7	B8	2	..	8905b	63	2996	5.8	-42 54	9.4	10.4	A2	1	..	20671b
14	3926	5.6	-28 49	8.3	8.9	Ko	3	..	24433b	64	2970	5.8	-43 29	9.1	9.4	A2	2	..	20556b
15	3541	5.6	-33 8	8.6	8.5	A5	4	..	18926b	65	2971	5.8	-43 49	9.2	10.0	K2	2	..	20671b
16	2965	5.6	-43 32	8.9	9.4	G5	1	..	20556b	66	2637	5.8	-49 56	7.84	8.4	F5	8	..	38414b
17	2827	5.6	-47 21	8.9	8.9	Ao	4	..	20858b	67	771	5.8	-59 33	6.54	6.8	B5	8	..	18486b
18	2826	5.6	-47 40	7.9	8.3	Fo	5	..	20858b	68	1446	5.9	+30 34	8.8	10.0	K5	3	..	37447i
19	1251	5.6	-56 10	9.0	9.5	A3	3	..	13007b	69	..	5.9	+14 27	..	..	G	1	..	4413m
20	948	5.7	+61 16	8.8	9.2	F5	4	..	37526i	70	1579	5.9	+13 12	9.4	10.2	G5	3	..	4413m
21	1404	5.7	+50 6	8.7	9.7	Ko	1	..	37515i	71	1456	5.9	+12 37	8.3	9.5	K5	1	..	15139b
22	..	5.7	+15 4	..	..	A	1	..	4413m	72	1492	5.9	+11 50	8.4	8.7	Fo	3	..	36977i
23	1587	5.7	+14 33	10.0	11.0	Ko	2	..	4413m	73	1590	5.9	+ 2 19	8.8	8.9	A2	1	..	37652i
24	1444	5.7	+10 47	8.8	9.8	Ko	3	..	15139b	74	1963	5.9	- 2 24	8.4	9.5	K2	4	E	39867b
25	1443	5.7	+10 19	8.8	8.9	A5	4	..	15139b	75	1780	5.9	- 3 43	8.16	8.58	F5	2	..	38609i
26	1628	5.7	+ 7 37	9.2	9.5	F2	3	..	15139b	76	1778	5.9	- 8 46	10.1	10.1	B9	1	..	44407b
27	1581	5.7	+ 3 6	9.2	9.5	Fo	3	..	39867b	77	1715	5.9	-18 14	8.5	9.5	Ko	2	..	20767b
28	1842	5.7	- 4 33	8.5	9.5	Ko	3	..	44407b	78	3546	5.9	-33 10	9.3	8.9	Ko	2	..	18926b
29	1783	5.7	- 7 42	7.5	7.5	B9	5	..	38609i	79	3374	5.9	-35 7	8.65	8.5	Ao	7	..	20534b
30	1884	5.7	-10 0	7.71	8.71	Ko	6	..	24606b	80	3375	5.9	-35 49	7.24	7.8	Fo	8	..	20534b
31	1824	5.7	-11 5	9.3	10.3	Ko	2	..	24606b	81	1194	6.0	+56 20	8.9	9.3	F5	2	..	37526i
32	1821	5.7	-12 32	10.4	10.4	B9	2	..	24606b	82	1176	6.0	+55 24	9.2	10.0	G5	2	..	37526i
33	1682	5.7	-15 27	9.2	9.3	A2	3	..	15402b	83	1405	6.0	+50 44	8.2	8.5	Fo	4	..	37515i
34	1815	5.7	-18 3	9.1	9.5	F5	4	..	15402b	84	1583	6.0	+36 50	9.5	10.5	Ko	2	..	37447i
35	1720	5.7	-19 25	7.5	8.0	B5	7	4,3	20767b	85	1729	6.0	+20 3	7.85	7.91	A2	4	..	37472i
36	1731	5.7	-23 3	9.2	9.2	Go	2	..	20767b	86	1518	6.0	+17 9	6.74	7.92	K5	5	E	37472i
37	3697	5.7	-27 43	7.43	8.7	Mb	1	..	8905b	87	1496	6.0	+15 19	8.4	8.5	A2	5	3,2	4413m
38	3928	5.7	-28 6	8.3	9.2	K2	1	..	12666b	88	1588	6.0	+14 12	9.4	9.4	Ao	6	..	4413m
39	3542	5.7	-33 18	9.3	9.2	Ko	2	..	18926b	89	1584	6.0	+ 3 21	6.79	7.57	G5	5	..	37652i
40	3372	5.7	-35 38	8.9	8.9	Ao	3	..	20534b	90	1781	6.0	- 3 44	6.62	7.62	Ko	5	..	38609i
41	2316	5.7	-51 48	9.2	9.6	F8	3	..	24589b	91	1843	6.0	- 4 17	8.6	9.1	F8	4	..	44407b
42	230	5.8	+80 48	7.30	8.30	Ko	5	..	38330i	92	2004	6.0	- 5 38	9.1	10.1	Ko	2	..	44407b
43	916	5.8	+62 19	7.8	8.4	Go	5	..	37526i	93	1968	6.0	- 6 11	9.1	10.2	K2	1	..	44407b
44	1411	5.8	+47 48	6.62	6.76	A5	8	E	37501i	94	1967	6.0	- 6 41	9.5	9.6	A2	2	..	44407b
45	1555	5.8	+34 18	8.8	9.4	Go	3	..	37447i	95	1887	6.0	- 9 10	7.01	6.96	B8	7	1,3	20801b
46	1728	5.8	+20 51	8.7	8.8	A2	3	..	37472i	96	1825	6.0	-11 20	9.7	10.3	Go	1	..	24606b
47	1495	5.8	+15 12	10.0	10.0	Ao	2	..	4413m	97	1857	6.0	-13 54	9.1	9.1	Ao	4	..	24606b
48	1578	5.8	+13 30	10.4	11.4	Ko	1	..	4413m	98	1684	6.0	-15 58	8.9	9.9	Ko	1	..	15402b
49	1454	5.8	+12 18	9.4	9.4	Ao	1	..	15139b	99	2998	6.0	-42 5	10.5	10.4	Ao	2	..	20671b
50	1554	5.8	+ 6 53	9.0	9.0	Ao	4	..	15139b	100	2960	6.0	-45 10	6.94	7.5	B8	10	..	20858b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

55000

7<sup>h</sup> 6<sup>m</sup>.0

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	2936	6.0	-46 25	10.0	10.0	F	2	..	38414b	51	1336	6.3	+27 16	9.5	9.6	A2	2	..	38172i
2	1196	6.0	-54 28	9.4	10.4	K	1	..	13007b	52	1558	6.3	+24 17	5.76	6.18	F5	8	..	37472i
3	1413	6.1	+47 27	7.08	7.42	F2	6	E	37501i	53	1583	6.3	+13 13	9.4	10.0	Go	5	..	4413m
4	1336	6.1	+28 22	9.4	10.5	K2	1	..	38172i	54	1448	6.3	+10 41	7.9	8.5	Go	3	..	36977i
5	1609	6.1	+22 27	7.35	7.77	F5	5	..	38238i	55	1560	6.3	+6 55	8.2	8.5	Fo	2	..	37652i
6	..	6.1	+16 8	..	..	A2	4	..	4413m	56	1587	6.3	+3 52	8.3	8.4	A2	4	..	37652i
7	..	6.1	+13 50	..	..	A	1	..	4413m	57	1634	6.3	-0 8	5.40	5.68	Fo	..	0.10	6148c
8	1581	6.1	+13 11	10.4	11.2	G5	2	..	4413m	58	1633	6.3	-0 15	8.7	8.8	A2	4	..	39867b
9	1493	6.1	+11 6	8.7	8.8	A3	1	..	36977i	59	1584	6.3	-1 28	8.8	8.8	Ao	4	..	39867b
10	1556	6.1	+6 23	9.0	9.0	B9	5	..	15139b	60	1969	6.3	-2 50	8.5	8.6	A2	3	..	38609i
11	1722	6.1	+1 48	7.9	9.0	K2	2	..	39687b	61	1785	6.3	-3 58	9.7	9.7	Ao	3	..	44407b
12	1788	6.1	-7 49	9.7	9.7	B9	2	..	44407b	62	1846	6.3	-4 44	8.9	8.9	B8	5	..	44407b
13	1890	6.1	-9 17	8.9	8.9	Ao	4	..	20801b	63	1904	6.3	-10 34	9.1	9.9	G5	2	..	20801b
14	1826	6.1	-11 25	8.1	8.1	B8	8	2,3	20801b	64	..	6.3	-10 49	..	..	A2	1	..	24606b
15	1827	6.1	-11 35	9.1	9.2	A2	2	..	20801b	65	1823	6.3	-12 29	9.0	10.2	K5	1	..	24606b
16	1858	6.1	-13 25	10.4	10.4	Ao	2	..	24606b	66	1824	6.3	-13 2	8.6	8.6	Ao	3	..	20801b
17	1821	6.1	-17 9	8.9	9.9	Ko	3	..	15402b	67	1749	6.3	-14 18	9.2	9.3	A3	2	..	15402b
18	4955	6.1	-24 7	10.0	8.6	Ao	2	..	20767b	68	1752	6.3	-15 3	8.76	9.76	Ko	1	..	15402b
19	3939	6.1	-28 35	6.95	7.1	B5	5	..	8905b	69	1736	6.3	-22 58	9.7	9.5	A	1	..	20767b
20	3384	6.1	-34 8	10.8	10.0	A5	2	..	20670b	70	3710	6.3	-27 19	5.55	6.9	G5	..	5.7	56,123
21	3376	6.1	-35 18	10.8	10.5	B9	1	..	20670b	71	3112	6.3	-39 41	10.6	9.9	A	2	..	20671b
22	2956	6.1	-40 46	9.3	9.6	F5	3	..	20671b	72	2641	6.3	-49 3	8.5	9.7	G5	4	..	38414b
23	1256	6.1	-56 30	8.9	9.8	G5	2	..	13007b	73	2322	6.3	-51 38	9.8	10.2	K2	1	..	24589b
24	686	6.1	-63 50	9.3	10.1	G5	1	..	15176b	74	..	6.3	-79 10	..	..	K5	2	..	20652b
25	427	6.1	-74 19	9.4	10.4	Ko	4	..	20652b	75	242	6.4	+81 26	6.20	6.20	B9	9	..	37546i
26	1556	6.2	+34 25	8.4	9.6	K5	3	..	37447i	76	481	6.4	+67 16	7.8	8.6	G5	4	..	37545i
27	1485	6.2	+26 0	8.8	8.9	A5	1	..	38172i	77	562	6.4	+64 57	7.25	7.75	F8	6	E	37545i
28	1411	6.2	+16 18	9.2	10.2	Ko	5	..	4413m	78	1489	6.4	+48 40	7.6	7.6	Ao	7	E	37501i
29	1589	6.2	+14 44	8.4	8.4	Ao	6	2,2	4413m	79	1337	6.4	+28 41	8.8	9.8	Ko	1	..	38172i
30	1582	6.2	+13 9	10.4	11.4	Ko	2	..	4413m	80	1487	6.4	+26 46	7.8	8.8	Ko	3	..	38172i
31	1558	6.2	+6 2	9.7	9.7	Ao	2	..	15139b	81	1497	6.4	+15 20	8.4	9.4	Ko	4	..	4413m
32	1617	6.2	+4 29	9.0	9.0	Ao	1	..	37652i	82	1498	6.4	+14 58	8.89	8.89	Ao	7	0,2	4413m
33	1586	6.2	+3 3	8.1	8.2	A2	3	..	37652i	83	1592	6.4	+14 47	9.7	10.5	G5	2	..	4413m
34	1591	6.2	+2 30	8.7	9.9	K5	1	..	39867b	84	1591	6.4	+14 11	10.4	11.2	G5	1	..	4413m
35	1784	6.2	-3 19	9.2	9.3	A2	3	..	44407b	85	1584	6.4	+13 48	10.0	10.4	F5	3	..	4413m
36	1845	6.2	-4 32	7.8	7.8	Ao	5	..	38609i	86	1496	6.4	+11 55	9.4	9.4	Ao	2	..	15139b
37	2006	6.2	-5 18	9.0	9.0	Ao	2	..	38609i	87	1631	6.4	+7 33	9.0	9.4	F5	3	..	15139b
38	1891	6.2	-9 40	8.7	9.7	Ko	3	..	24606b	88	1576	6.4	+5 7	8.2	8.7	F8	2	..	37652i
39	1758	6.2	-20 6	7.51	7.8	A3	7	1,4	20767b	89	1973	6.4	-6 47	8.7	9.3	Go	4	..	44407b
40	4958	6.2	-24 11	8.5	8.3	Ao	4	..	20767b	90	1790	6.4	-7 32	7.7	8.7	Ko	1	..	38609i
41	3717	6.2	-32 45	11.7	11.7	Ao	2	..	20670b	91	1779	6.4	-8 58	7.51	7.79	Fo	6	0,2	20801b
42	3549	6.2	-33 52	9.3	8.2	Ao	7	..	20670b	92	..	6.4	-11 3	..	..	Ao	2	..	..
43	3382	6.2	-36 28	10.8	11.1	A	1	..	20670b	93	1905	6.4	-11 3	10.4	10.4	Ao	2	R	24606b
44	3354	6.2	-37 28	9.3	9.2	A2	3	..	20534b	94	1828	6.4	-11 22	10.6	10.6	B9	2	..	24606b
45	2979	6.2	-43 44	10.5	10.3	A5	2	..	20671b	95	1824	6.4	-17 53	7.9	8.7	G5	7	..	15402b
46	1198	6.2	-54 19	8.6	9.5	K5	2	..	13007b	96	1729	6.4	-19 54	9.1	9.2	Ao	2	..	20767b
47	1257	6.2	-56 47	9.5	9.8	F	2	..	13007b	97	3714	6.4	-27 56	10.2	8.7	A	2	..	12666b
48	773	6.2	-59 23	8.8	9.8	Ko	1	..	13007b	98	3553	6.4	-33 54	11.3	9.7	Fo	2	..	20670b
49	1298	6.3	+51 33	8.5	9.3	G5	1	..	37515i	99	3386	6.4	-34 29	9.3	9.4	A2	4	..	20670b
50	1584	6.3	+36 36	9.4	10.4	Ko	1	..	37447i	100	3385	6.4	-36 30	9.9	9.7	F5	4	..	20670b

## THE HENRY DRAPER CATALOGUE.

55100

7<sup>h</sup> 6<sup>m</sup>.4

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	3213	6.4	-38 7	9.2	9.4	G5	3	..	20534b	51	591	6.6	-68 40	6.46	8.0	G5	8	..	15223b
2	3212	6.4	-38 15	9.5	9.6	G5	3	..	20534b	52	103	6.6	-87 27	8.7	9.7	Ko	3	..	15145b
3	2325	6.4	-51 59	8.8	9.6	Ko	3	0.3	24589b	53	491	6.7	+66 26	8.6	9.0	F5	2	..	38155i
4	1164	6.4	-55 18	9.8	9.8	A	1	..	13007b	54	1037	6.7	+60 34	9.2	9.2	A	2	..	37526i
5	1145	6.4	-57 10	6.7	7.5	Fo	9	..	13007b	55	1121	6.7	+53 46	8.0	8.1	A5	4	E	37526i
6	244	6.4	-78 40	9.8	10.3	F8	4	..	20652b	56	1609	6.7	+25 55	6.89	6.89	Ao	8	..	38172i
7	..	6.5	+15 34	..	..	F	2	..	4413m	57	1540	6.7	+21 8	8.6	9.0	F5	3	..	38238i
8	..	6.5	+15 26	..	..	Ao	2	..	4413m	58	1520	6.7	+16 57	10.0	10.3	F2	4	..	4413m
9	1593	6.5	+14 50	9.11	9.53	F5	4	..	4413m	59	1594	6.7	+14 53	9.14	10.14	Ko	1	..	4413m
10	1556	6.5	+8 58	9.2	9.2	B8	3	..	15139b	60	1596	6.7	+14 52	9.2	10.0	G5	6	..	4413m
11	1577	6.5	+5 50	6.04	6.04	Ao	9	..	37652i	61	1595	6.7	+14 31	10.4	11.5	K2	2	..	4413m
12	1635	6.5	-0 52	8.3	9.3	Ko	4	..	39867b	62	..	6.7	+14 23	..	..	K2	1	..	4413m
13	1586	6.5	-1 11	8.5	9.7	K5	1	..	39867b	63	1561	6.7	+6 32	8.8	8.8	Ao	2	..	37652i
14	1786	6.5	-3 12	9.5	9.6	A2	2	..	44407b	64	1592	6.7	+3 33	10.0	10.0	Ao	1	..	39867b
15	1788	6.5	-3 50	9.3	9.4	A3	3	..	44407b	65	1593	6.7	+2 17	9.7	9.7	Ao	1	..	39867b
16	1974	6.5	-6 36	9.3	9.3	Ao	2	..	44407b	66	1852	6.7	-4 30	9.1	9.1	Ao	4	..	44407b
17	1895	6.5	-9 8	9.1	9.1	B9	3	..	20801b	67	1851	6.7	-4 53	9.1	9.4	Fo	4	..	44407b
18	1906	6.5	-10 22	8.0	8.0	B8	7	..	20801b	68	1832	6.7	-11 18	10.0	11.0	Ko	1	..	24606b
19	1907	6.5	-10 32	9.1	9.1	Ao	2	..	20801b	69	1817	6.7	-16 57	9.7	9.8	A2	1	..	15402b
20	..	6.5	-10 45	..	..	Ao	1	..	24606b	70	1733	6.7	-19 38	8.3	9.0	F8	3	..	20767b
21	1825	6.5	-12 21	9.1	9.1	B8	3	..	20801b	71	1732	6.7	-19 56	8.78	9.5	Ko	1	..	20767b
22	3991	6.5	-29 53	7.85	7.9	A5	3	..	8905b	72	5013	6.7	-23 56	10.0	9.0	A3	2	..	20767b
23	4132	6.5	-31 40	9.5	8.6	Ao	4	..	18926b	73	4030	6.7	-30 29	7.34	7.6	B3	6	..	8905b
24	3003	6.5	-42 10	9.6	9.4	Ao	5	..	20671b	74	3362	6.7	-37 22	8.6	8.9	A2	5	..	20534b
25	1165	6.5	-55 59	9.7	9.8	A2	2	..	13007b	75	3007	6.7	-42 57	10.2	9.9	Ao	2	..	20671b
26	589	6.5	-68 51	9.2	9.8	Go	5	..	15223b	76	2754	6.7	-48 27	9.6	10.2	G5	2	..	38414b
27	355	6.6	+72 27	9.2	9.5	Fo	2	..	37559i	77	2645	6.7	-49 26	9.0	10.5	K5	2	..	38414b
28	1052	6.6	+57 27	8.2	8.7	F8	4	..	37526i	78	1038	6.8	+59 56	7.31	8.31	Ko	6	..	37526i
29	1500	6.6	+32 8	6.66	6.66	Ao	9	..	37447i	79	1576	6.8	+35 52	8.2	8.5	F2	4	..	37447i
30	1337	6.6	+27 26	6.44	6.86	F5	8	..	38172i	80	1340	6.8	+27 57	8.2	8.5	F2	4	..	38172i
31	1412	6.6	+16 3	10.4	10.5	A2	3	..	4413m	81	1500	6.8	+15 19	10.4	11.5	K2	1	..	4413m
32	..	6.6	+15 21	..	..	G	1	..	4413m	82	1587	6.8	+13 37	9.4	9.8	F5	4	..	4413m
33	1850	6.6	-4 45	9.3	9.8	F8	2	..	44407b	83	1687	6.8	+8 20	8.5	9.1	Go	4	..	15139b
34	1792	6.6	-8 1	9.2	9.2	B8	3	..	44407b	84	1580	6.8	+5 39	6.22	7.00	G5	5	..	37652i
35	1908	6.6	-10 16	7.16	7.04	B5	8	4.3	20801b	85	1636	6.8	-0 20	4.09	4.09	Ao	..	R	6148c
36	1829	6.6	-11 20	10.2	10.2	Ao	2	..	24606b	86	1790	6.8	-3 26	9.5	9.5	Ao	2	..	44407b
37	1830	6.6	-11 52	7.24	8.02	G5	6	0.3	20801b	87	1789	6.8	-3 58	8.3	8.3	B9	3	..	38609i
38	1827	6.6	-12 21	9.2	9.2	Ao	1	..	20801b	88	1829	6.8	-12 41	9.0	9.3	Fo	3	..	24606b
39	1862	6.6	-13 46	9.7	9.7	Ao	2	..	24606b	89	1863	6.8	-13 37	9.2	9.6	F5	2	..	24606b
40	1759	6.6	-20 10	9.5	9.2	Ao	2	..	20767b	90	1761	6.8	-20 7	8.98	8.9	A2	3	..	20767b
41	1739	6.6	-22 22	8.7	9.3	K2	2	2.1	12631b	91	4154	6.8	-25 15	8.9	8.9	F8	1	..	12666b
42	5008	6.6	-23 5	10.7	9.2	A2	2	..	20767b	92	4001	6.8	-29 34	11.4	9.1	B8	2	..	18926b
43	3992	6.6	-29 11	7.7	8.0	F5	5	..	18926b	93	2964	6.8	-40 23	9.0	9.6	A3	4	..	20671b
44	4027	6.6	-30 56	8.3	7.7	Ao	2	..	8905b	94	2947	6.8	-46 12	8.0	8.5	Ko	3	..	20858b
45	3725	6.6	-32 42	9.3	9.2	A2	2	..	18926b	95	2646	6.8	-49 49	8.6	9.0	Ao	4	..	38414b
46	2988	6.6	-43 56	9.8	9.7	B9	3	..	20671b	96	852	6.8	-58 12	7.9	8.3	Ao	8	..	13007b
47	1089	6.6	-52 12	8.6	9.3	Go	4	..	24589b	97	524	6.8	-71 7	8.1	8.7	Go	7	..	15168b
48	1090	6.6	-52 30	9.0	9.6	F8	3	..	24589b	98	1053	6.9	+57 29	7.90	9.25	Ma	3	..	37526i
49	1256	6.6	-53 44	8.9	9.2	A5	3	..	24589b	99	1184	6.9	+52 43	7.16	7.44	Fo	6	..	37515i
50	655	6.6	-66 51	8.0	9.0	Ko	7	..	15223b	100	1712	6.9	+38 17	8.0	8.0	Ao	6	..	37447i

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1542	m. 6.9	° +21 30	7.7	8.5	G5	4	..	37472i	51	2609	m. 7.0	° -50 10	8.39	8.4	Ao	7	..	38414b
2	1413	6.9	+16 24	9.4	9.4	Ao	5	..	4413m	52	112	7.0	-84 48	9.5	10.5	K	1	..	22238b
3	1501	6.9	+15 10	10.4	11.5	K2	1	..	4413m	53	389	7.1	+71 6	8.4	9.2	G5	2	..	37559i
4	1463	6.9	+12 42	7.9	7.9	B9	4	..	36977i	54	1241	7.1	+46 17	9.2	10.0	G5	1	..	37501i
5	1452	6.9	+10 15	9.2	9.2	Ao	2	..	15139b	55	1678	7.1	+42 43	8.5	9.5	Ko	2	..	37501i
6	1560	6.9	+9 24	9.0	9.0	Ao	4	..	15139b	56	1679	7.1	+42 12	9.9	10.4	F8	1	..	37501i
7	1634	6.9	+7 48	8.8	9.3	F8	4	..	15139b	57	1567	7.1	+24 50	8.56	8.98	F5	1	..	38172i
8	1633	6.9	+7 40	8.8	9.4	Go	4	..	15139b	58	1415	7.1	+16 52	10.0	10.1	A2	2	..	4413m
9	2011	6.9	-5 30	8.5	9.5	Ko	3	..	44407b	59	1503	7.1	+15 4	9.7	10.7	Ko	3	..	4413m
10	1831	6.9	-12 47	9.3	10.1	G5	1	..	24606b	60	1597a	7.1	+14 51	10.4	10.4	Ao	3	..	4413m
11	1832	6.9	-12 54	7.7	7.7	Ao	4	1.7	8909b	61	1454	7.1	+10 9	8.57	9.75	K5	2	..	15139b
12	1689	6.9	-15 58	9.1	9.4	Fo	2	..	46170b	62	1582	7.1	+4 59	8.56	8.62	A2	2	..	37652i
13	1828	6.9	-17 10	6.67	6.65	B9	6	0.5	8909b	63	1592	7.1	-1 6	8.7	9.8	K2	2	..	39867b
14	4156	6.9	-25 45	8.3	8.3	Ao	6	..	12666b	64	1593	7.1	-1 17	8.7	8.7	Ao	6	..	39867b
15	4037	6.9	-31 1	9.3	8.6	A2	2	..	18926b	65	1797	7.1	-7 28	9.0	10.1	K2	1	..	44407b
16	3216	6.9	-38 5	10.6	10.4	Go	2	..	20670b	66	1911	7.1	-10 46	10.0	10.0	B8	3	..	24606b
17	3119	6.9	-39 36	10.6	9.9	Fo	2	..	20671b	67	1833	7.1	-11 10	10.4	10.4	Ao	3	..	24606b
18	2966	6.9	-41 1	8.9	9.6	A3	4	..	20671b	68	1834	7.1	-11 31	10.2	10.2	Ao	4	..	24606b
19	3008	6.9	-42 31	10.5	9.9	Ao	2	..	20671b	69	1829	7.1	-17 58	9.2	9.3	A2	3	..	15402b
20	2990	6.9	-43 13	9.4	10.0	Ko	2	..	20671b	70	1736	7.1	-20 1	9.08	9.2	Ao	3	..	20767b
21	2838	6.9	-47 50	9.8	10.0	G5	2	..	38414b	71	1791	7.1	-21 38	6.73	7.0	B8	6	..	42935b
22	2648	6.9	-49 40	8.5	9.6	Ko	3	..	38414b	72	3729	7.1	-27 36	9.3	8.4	A2	4	..	12666b
23	2332	6.9	-51 39	8.2	8.7	F8	2	..	10697b	73	3221	7.1	-38 58	10.8	10.2	G5	2	..	20670b
24	1240	7.0	+46 36	10.2	11.6	Mb	..	..	M	74	3122	7.1	-39 26	8.6	9.0	Fo	5	..	20671b
25	1502	7.0	+32 18	7.22	7.36	A5	7	..	37447i	75	2862	7.1	-41 22	10.3	9.9	Ao	2	..	20671b
26	1501	7.0	+32 11	9.4	10.2	G5	2	..	37447i	76	2981	7.1	-45 19	9.6	8.9	F2	2	..	20858b
27	1521	7.0	+16 58	10.0	11.0	Ko	1	..	4413m	77	1092	7.1	-52 40	9.2	9.3	A5	3	..	24589b
28	1414	7.0	+16 15	8.5	8.9	F5p	7	3.2 R	4413m	78	1258	7.1	-53 22	8.8	8.7	Ao	4	..	24589b
29	1502	7.0	+15 27	8.8	9.9	K2	2	..	4413m	79	241	7.1	-79 32	9.5	10.5	Ko	3	..	20652b
30	1597	7.0	+14 8	10.4	10.5	A2	2	..	4413m	80	1065	7.2	+59 49	5.33	6.33	Ko	10	..	37526i
31	..	7.0	+13 20	..	..	G	1	..	4413m	81	1736	7.2	+20 45	8.8	9.8	Ko	1	..	38238i
32	1588	7.0	+13 2	9.0	9.0	Ao	6	..	4413m	82	1505	7.2	+15 31	8.1	8.7	Go	5	..	4413m
33	1453	7.0	+10 22	7.7	8.7	Ko	2	..	36977i	83	1504	7.2	+15 21	7.39	7.39	Ao	6	0.9	36977i
34	1563	7.0	+6 55	8.8	9.3	F8	1	..	15139b	84	1598	7.2	+14 46	var.	var.	Rp	1	R	4413m
35	1593	7.0	+3 54	9.0	9.1	A2	2	..	39867b	85	..	7.2	+14 35	..	..	Fo	2	..	4413m
36	1591	7.0	-1 29	10.0	10.1	A2	3	..	39867b	86	1589	7.2	+13 36	10.4	10.8	F5	2	..	4413m
37	1974	7.0	-2 52	8.9	8.9	Ao	3	E	39867b	87	1565	7.2	+6 52	9.4	9.9	F8	2	..	15139b
38	1979	7.0	-6 17	9.1	9.4	Fo	2	..	44407b	88	1848	7.2	+0 38	8.3	9.3	Ko	1	..	37700i
39	1978	7.0	-6 24	8.6	8.6	B9	2	..	38609i	89	1595	7.2	-1 24	10.0	10.1	A2	2	..	39867b
40	1898	7.0	-9 20	10.2	10.2	Ao	3	..	24606b	90	2014	7.2	-5 16	8.1	9.2	K2	2	..	38609i
41	1910	7.0	-10 20	9.5	9.6	A3	2	..	24606b	91	2013	7.2	-5 17	9.2	9.5	Fo	1	..	38609i
42	1760	7.0	-14 51	8.3	9.1	G5	3	..	15402b	92	1786	7.2	-8 27	9.1	9.4	Fo	3	..	44407b
43	1741	7.0	-22 49	9.1	9.2	F5	2	..	12631b	93	1761	7.2	-14 12	9.1	9.1	Ao	1	..	15402b
44	5023	7.0	-23 22	9.0	8.7	Ao	2	..	20767b	94	1794	7.2	-21 32	9.3	9.0	Ao	3	..	20767b
45	3980	7.0	-26 48	8.9	9.0	Fo	2	..	12666b	95	1743	7.2	-22 26	9.1	9.3	Ko	2	..	12631b
46	4140	7.0	-31 14	7.8	8.5	K2	3	..	18926b	96	4163	7.2	-25 44	8.7	8.9	G5	1	..	12666b
47	3364	7.0	-37 3	7.72	9.1	Ko	4	..	20534b	97	3736	7.2	-32 28	8.9	8.8	Ao	1	..	18926b
48	2967	7.0	-40 12	8.35	9.0	A3	7	..	20671b	98	3391	7.2	-34 52	9.65	10.0	Ko	3	..	20670b
49	2992	7.0	-44 1	9.8	9.7	F5	2	..	20671b	99	3385	7.2	-35 11	8.75	9.1	Ao	7	..	20670b
50	3179	7.0	-44 49	9.4	10.6	Ma	..	..	M	100	3126	7.2	-39 39	8.9	9.4	Fo	4	..	20671b



THE HENRY DRAPER CATALOGUE.

55300

7<sup>h</sup> 7<sup>m</sup>.2

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1260	7.2	-56 54	8.6	9.0	A5	4	..	13007b	51	2657	7.4	-49 2	10.2	9.9	Ao	3	..	38414b
2	563	7.2	-72 50	8.0	9.1	K2	6	..	20652b	52	1262	7.4	-56 12	8.4	8.7	Fo	5	..	13007b
3	1591	7.3	+13 12	10.4	11.4	Ko	1	..	4413m	53	422	7.4	-75 4	8.53	9.9	Ma	4	..	20652b
4	1464	7.3	+12 6	8.4	9.4	Ko	2	..	15139b	54	1578	7.5	+35 44	7.72	8.72	Ko	5	..	37447i
5	1503	7.3	+11 15	8.5	8.9	F5	3	..	15139b	55	1513	7.5	+31 3	9.4	9.4	Ao	2	..	37447i
6	1637	7.3	+7 49	9.7	9.7	Ao	2	..	15139b	56	1342	7.5	+28 40	7.7	7.7	Ao	7	..	38172i
7	1566	7.3	+6 55	9.7	10.3	Go	1	R	15139b	57	1341	7.5	+28 8	9.4	10.4	K	1	..	38172i
8	1639	7.3	-0 13	9.7	9.7	Ao	3	..	39867b	58	1416	7.5	+16 48	10.4	11.2	G5	1	..	4413m
9	1597	7.3	-1 37	8.5	8.5	B9	5	..	39867b	59	1599	7.5	+14 44	9.7	10.7	Ko	2	..	4413m
10	1976	7.3	-2 51	8.3	8.4	A3	2	..	38609i	60	1586	7.5	+5 15	9.0	9.1	A2	3	..	15139b
11	1787	7.3	-8 13	9.3	9.6	Fo	2	..	44407b	61	1598	7.5	+2 17	9.0	9.0	Ao	2	..	39867b
12	..	7.3	-8 30	..	..	B9	1	..	44407b	62	1640	7.5	-0 23	8.7	8.7	B9	4	..	37700i
13	1913	7.3	-10 25	10.1	10.1	Ao	3	..	24606b	63	1641	7.5	-0 30	9.0	9.4	F5	3	..	37700i
14	1833	7.3	-12 30	9.7	9.7	Ao	2	..	24606b	64	2017	7.5	-5 10	10.0	10.0	Ao	2	..	44407b
15	1834	7.3	-12 33	10.1	10.1	Ao	3	..	24606b	65	1982	7.5	-6 29	9.2	10.2	Ko	1	..	44407b
16	1866	7.3	-13 42	9.3	9.7	F5	2	..	24606b	66	1915	7.5	-10 20	9.3	9.9	Go	2	..	24606b
17	1690	7.3	-15 12	8.40	9.40	Ko	2	..	15402b	67	1914	7.5	-10 47	9.3	9.3	B9	3	..	20801b
18	1724	7.3	-18 54	8.9	9.0	A5	5	..	20767b	68	1836	7.5	-11 13	9.5	10.5	Ko	3	..	24606b
19	1739	7.3	-19 15	9.3	9.2	Fo	2	..	20767b	69	1837	7.5	-11 53	9.2	9.2	B9	2	..	20801b
20	5035	7.3	-23 48	9.5	8.6	A5	3	..	20767b	70	1823	7.5	-16 47	9.7	9.7	A	1	..	15402b
21	3564	7.3	-33 33	10.3	9.7	A5	2	..	20670b	71	1836	7.5	-17 13	9.3	9.3	B8	2	..	15402b
22	3393	7.3	-34 40	10.6	10.2	B9	2	..	20670b	72	1725	7.5	-18 33	10.4	10.4	Ao	2	..	15402b
23	3395	7.3	-34 47	9.3	10.2	G5	3	..	20670b	73	4176	7.5	-25 24	9.0	8.9	A5	2	..	12666b
24	3225	7.3	-38 5	10.8	10.5	Fo	1	..	20670b	74	4174	7.5	-25 36	8.7	8.6	Ao	3	..	12666b
25	3014	7.3	-42 37	9.4	9.4	Ao	5	..	20671b	75	3398	7.5	-34 40	10.8	10.3	A5	2	..	20670b
26	2612	7.3	-50 15	8.5	9.6	Ko	3	..	38414b	76	2984	7.5	-45 31	9.0	8.6	Fo	3	..	20858b
27	1261	7.3	-56 11	8.3	8.6	F	3	R	13007b	77	855	7.5	-58 55	8.9	9.7	G5	2	..	13007b
28	689	7.3	-63 18	9.9	9.9	Ao	2	..	15176b	78	564	7.5	-72 26	9.9	10.7	G5	1	..	15168b
29	421	7.3	-75 32	9.9	10.5	Go	1	..	20652b	79	431	7.5	-76 45	10.1	10.7	G	1	..	20652b
30	468	7.4	+68 55	8.0	8.0	Ao	4	0.4	38155i	80	625	7.6	+64 30	9.7	10.7	K	2	E	37545i
31	1618	7.4	+41 23	8.0	8.3	F2	4	..	37501i	81	1680	7.6	+41 58	9.4	10.2	G5	1	..	37501i
32	1681	7.4	+37 12	10.0	11.0	Ko	1	..	37447i	82	1588	7.6	+36 14	10.2	11.0	G5	2	..	37447i
33	1650	7.4	+19 6	7.5	7.5	Ao	4	..	37472i	83	1417	7.6	+16 20	5.31	6.66	Mb	..	0.8-	56.83
34	1585	7.4	+5 6	10.4	10.4	A	2	..	15139b	84	1507	7.6	+15 42	10.4	10.5	A2	2	..	4413m
35	1849	7.4	+0 45	8.4	9.4	Ko	2	..	37700i	85	1506	7.6	+11 48	8.4	8.4	Ao	2	..	36977i
36	1979	7.4	-2 18	9.7	9.8	A2	2	E	39867b	86	1850	7.6	+0 42	9.4	9.4	Ao	2	..	39867b
37	1980	7.4	-2 24	8.1	9.2	K2	4	..	39867b	87	1983	7.6	-2 13	9.3	9.4	A2	3	E	39867b
38	2016	7.4	-5 16	9.5	9.6	A2	3	..	44407b	88	1981	7.6	-2 23	8.5	8.5	Ao	3	..	38609i
39	1900	7.4	-9 35	9.7	10.0	F2	1	..	24606b	89	1982	7.6	-2 47	8.3	9.3	Ko	2	E	39867i
40	1901	7.4	-9 46	9.2	9.2	Ao	4	..	20801b	90	1984	7.6	-6 22	9.2	9.3	A2	3	..	44407b
41	1867	7.4	-13 43	10.0	10.0	Ao	2	..	24606b	91	1983	7.6	-7 4	9.0	10.0	Ko	1	..	44407b
42	1835	7.4	-17 12	9.2	9.2	Ao	2	..	15402b	92	1902	7.6	-9 37	10.0	10.0	Ao	1	..	24606b
43	1833	7.4	-17 30	9.5	9.5	B9	2	..	15402b	93	..	7.6	-12 7	..	..	A2	2	..	24606b
44	1767	7.4	-20 43	5.71	5.6	Ao	8	..	42935b	94	1763	7.6	-14 38	9.0	8.8	B3	5	..	15402b
45	3735	7.4	-27 34	7.12	8.1	Ko	5	..	12666b	95	1742	7.6	-19 44	8.1	8.1	B9	5	0.2	20767b
46	3973	7.4	-28 7	9.3	8.9	B9	3	..	12666b	96	4025	7.6	-29 18	8.3	8.8	Ao	2	..	18926b
47	3391	7.4	-35 15	9.7	10.3	Ko	3	..	20670b	97	3400	7.6	-34 12	7.8	7.9	B8	3	..	7406b
48	2865	7.4	-41 6	7.3	7.7	A2	9	..	20671b	98	3403	7.6	-36 31	10.6	10.7	Go	1	..	20670b
49	3189	7.4	-44 23	8.9	8.5	B9	4	..	20858b	99	2997	7.6	-43 14	9.6	10.3	F8	2	..	20671b
50	2843	7.4	-47 14	8.6	8.6	F5	3	..	20858b	100	2985	7.6	-45 24	7.8	7.6	A2	7	..	20858b



## ANNALS OF HARVARD COLLEGE OBSERVATORY.

55400

7<sup>h</sup> 7<sup>m</sup>.6

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	2613	7.6	-50 48	10.0	9.6	Ao	2	..	24589b	51	2847	7.8	-48 1	9.1	9.4	F5	2	..	20858b
2	1150	7.6	-57 20	9.0	9.8	F8	2	..	13007b	52	2763	7.8	-48 18	8.4	9.0	F8	3	..	20858b
3	246	7.7	+78 6	7.55	7.89	F2	5	..	37559i	53	1260	7.8	-53 21	8.7	8.6	Ao	5	..	24589b
4	..	7.7	+55 30	..	..	Ma	..	..	M	54	1152	7.8	-57 25	9.8	9.8	Ao	3	..	13007b
5	1303	7.7	+51 37	7.28	8.28	Ko	4	..	37515i	55	291	7.8	-77 58	10.0	10.1	A3	4	..	20652b
6	1504	7.7	+32 51	9.4	10.0	Go	2	..	37447i	56	357	7.9	+72 35	8.7	9.2	F8	4	..	37559i
7	1514	7.7	+31 4	9.8	9.8	Ao	2	..	37447i	57	1619	7.9	+41 54	10.2	10.3	A2	1	..	37501i
8	1341	7.7	+27 50	9.5	9.8	F	1	..	38172i	58	1613	7.9	+25 11	8.4	9.4	Ko	2	5,2	38172i
9	1418	7.7	+16 32	10.4	11.2	G5	3	..	4413m	59	1740	7.9	+20 25	9.5	9.6	A3	1	..	38238i
10	1508	7.7	+14 58	9.7	10.3	G	1	..	4413m	60	1528	7.9	+18 8	8.3	9.1	G5	2	..	38238i
11	1600	7.7	+13 56	6.70	7.70	Ko	6	0,9	36977i	61	1510	7.9	+15 37	10.4	10.5	A2	2	..	4413m
12	1596	7.7	+3 55	7.9	8.7	G5	3	..	37652i	62	1597	7.9	+13 38	9.2	10.2	Ko	1	..	4413m
13	1852	7.7	+0 53	8.29	8.29	Ao	4	..	37700i	63	1596	7.9	+13 28	9.0	9.1	A2	6	..	4413m
14	1986	7.7	-2 10	9.3	9.3	Ao	3	E	39867b	64	1595	7.9	+13 15	9.2	9.6	F5	5	..	4413m
15	1987	7.7	-3 0	8.1	8.5	F5	4	..	38609i	65	1697	7.9	+8 44	8.5	8.6	A2	4	..	15139b
16	1985	7.7	-6 36	9.1	9.2	A2	2	..	38609i	66	1568	7.9	+5 58	8.7	8.7	B9	3	..	37700i
17	1802	7.7	-8 2	7.8	7.8	Ao	3	..	38609i	67	1623	7.9	+4 31	9.0	9.1	A5	2	..	37652i
18	1904	7.7	-9 18	9.5	9.5	B9	2	..	24606b	68	1644	7.9	-0 20	9.4	9.4	Ao	3	..	39867b
19	1903	7.7	-9 59	8.71	8.69	B9	4	..	20801b	69	1918	7.9	-10 57	9.3	9.3	Ao	2	..	20801b
20	1916	7.7	-10 49	8.9	8.7	B	2	..	20801b	70	1873	7.9	-13 17	9.5	10.3	G5	1	..	24606b
21	1838	7.7	-12 47	9.3	9.3	A	2	..	24606b	71	1801	7.9	-21 6	8.7	9.0	Fo	4	..	20767b
22	1870	7.7	-13 19	9.5	9.5	Ao	4	..	24606b	72	3573	7.9	-33 18	8.6	9.4	K2	1	..	18926b
23	1694	7.7	-15 31	9.0	9.0	B9	3	..	15402b	73	3403	7.9	-34 56	10.8	10.0	F2	3	..	20670b
24	1825	7.7	-16 32	9.5	9.5	Ao	1	R	46170b	74	3233	7.9	-38 56	6.82	7.7	A2	4	2,10	7406b
25	1840	7.7	-17 28	10.0	10.0	Ao	1	..	15402b	75	3004	7.9	-43 18	9.1	9.4	A2	2	..	20556b
26	1744	7.7	-20 0	8.48	8.7	A3	4	..	20767b	76	3199	7.9	-44 31	8.5	9.4	Ko	2	..	20858b
27	3742	7.7	-32 38	8.6	10.0	K5	1	..	20670b	77	1265	7.9	-56 12	8.0	8.6	Fo	5	..	13007b
28	3569	7.7	-33 42	9.3	9.4	F5	3	..	20670b	78	710	7.9	-67 46	8.0	8.0	B8	7	..	15223b
29	3401	7.7	-34 24	10.8	9.7	Fo	4	..	20670b	79	1066	8.0	+59 13	9.7	10.7	K	1	..	37526i
30	3396	7.7	-35 20	11.3	10.6	A2	2	..	20670b	80	1682	8.0	+42 14	8.9	9.9	Ko	2	..	37501i
31	2660	7.7	-49 46	9.2	10.5	K5	2	..	38414b	81	1511	8.0	+15 51	10.0	10.5	F8	2	..	4413m
32	1171	7.7	-55 33	9.0	9.8	Ko	1	..	13007b	82	1602	8.0	+14 26	10.4	10.5	A2	4	..	4413m
33	778	7.7	-60 24	7.4	8.2	Fo	4	..	18486b	83	..	8.0	+14 25	..	..	A2	2	..	4413m
34	1509	7.8	+15 24	8.8	9.8	Ko	4	..	4413m	84	1568	8.0	+9 11	7.9	8.9	Ko	3	..	15139b
35	1457	7.8	+10 15	10.4	11.0	Go	2	..	15139b	85	1589	8.0	+5 25	9.0	10.1	K2	2	..	15139b
36	1598	7.8	+3 42	9.0	9.0	B9	2	..	39867b	86	1624	8.0	+4 1	9.0	10.0	Ko	1	..	39867b
37	1597	7.8	+3 6	8.2	8.5	Fo	3	..	37652i	87	1600	8.0	+3 1	9.7	9.8	A3	2	..	39867b
38	1794	7.8	-8 32	8.3	8.6	Fo	5	..	44407b	88	1854	8.0	+0 24	8.3	8.9	Go	3	..	37700i
39	1905	7.8	-9 40	8.1	8.1	B8	5	..	20801b	89	1989	8.0	-6 58	7.8	8.1	F2	4	..	38609i
40	1840	7.8	-11 36	9.5	10.3	G5	1	..	24606b	90	1798	8.0	-8 35	10.1	10.1	B9	1	..	44407b
41	1841	7.8	-11 55	9.1	9.2	A2	3	..	20801b	91	1906	8.0	-9 32	9.0	9.4	F5	3	..	24606b
42	1842	7.8	-12 0	9.3	9.2	B5	4	..	24606b	92	1840	8.0	-12 51	9.7	10.8	K2	1	..	24606b
43	1726	7.8	-18 19	8.1	9.3	K5	5	..	15402b	93	1768	8.0	-14 19	8.1	8.6	F8	4	..	15402b
44	1746	7.8	-19 6	8.7	8.6	B9	4	..	20767b	94	1728	8.0	-18 26	9.7	9.7	B8	3	..	15402b
45	1745	7.8	-19 27	7.9	8.3	A5	7	2,3	20767b	95	1802	8.0	-21 59	8.6	8.6	A2	4	..	20767b
46	1770	7.8	-20 14	8.98	9.0	A2	3	..	20767b	96	1749	8.0	-22 48	8.5	8.6	G5	3	..	20767b
47	4029	7.8	-29 38	8.0	8.0	Go	2	..	8905b	97	5057	8.0	-23 11	10.4	9.2	Ao	2	..	20767b
48	3570	7.8	-34 1	10.8	9.4	K2	3	..	20670b	98	5058	8.0	-23 38	9.5	8.9	A2	2	..	20767b
49	3137	7.8	-39 6	7.8	8.2	B9	8	..	20671b	99	3988	8.0	-28 14	8.1	8.9	Ko	1	..	12666b
50	3198	7.8	-44 17	10.0	9.7	Ao	3	..	20671b	100	3989	8.0	-28 50	8.5	9.2	Ko	1	..	12666b

THE HENRY DRAPER CATALOGUE.

55500

7<sup>h</sup> 8<sup>m</sup>.0

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	3411	8.0	-36 38	10.3	10.9	K2	2	..	20670b	51	1685	8.3	+37 14	10.7	11.5	G5	2	..	37447i
2	3138	8.0	-39 55	9.9	9.9	F5	2	..	20671b	52	1492	8.3	+33 0	9.5	10.1	Go	2	..	37447i
3	1097	8.0	-52 48	9.0	9.9	Ko	2	..	24589b	53	..	8.3	+16 57	..	..	A	1	..	4413m
4	1201	8.0	-54 54	8.97	9.5	Go	2	..	13007b	54	..	8.3	+15 49	..	..	F2	2	..	4413m
5	432	8.0	-76 40	10.6	10.7	A5	2	..	20652b	55	1603	8.3	+14 9	7.5	8.0	F8	7	2,3	4413m
6	1575	8.1	+24 11	8.6	8.6	Ao	2	..	38238i	56	1510	8.3	+11 27	8.3	8.8	F8	3	..	15139b
7	1527	8.1	+17 2	9.7	10.0	F2	4	..	4413m	57	1458	8.3	+10 52	7.10	8.10	Ko	4	..	36977i
8	1419	8.1	+16 45	7.4	7.7	F2	8	..	4413m	58	1571	8.3	+ 6 33	9.0	9.0	Ao	3	..	15139b
9	1420	8.1	+16 2	7.7	8.1	F5	8	3,4	4413m	59	1647	8.3	- 0 57	9.0	9.8	G5	2	..	39867b
10	1512	8.1	+15 32	8.5	9.7	K5	2	..	4413m	60	1996	8.3	- 2 28	9.2	9.3	A2	2	E	39867b
11	1509	8.1	+11 49	8.8	8.9	A2	2	..	15139b	61	1842	8.3	-12 12	8.5	8.5	B8	7	..	20801b
12	1698	8.1	+ 8 22	8.5	9.6	K2	2	..	15139b	62	1843	8.3	-12 26	9.1	9.1	B8	3	R	20801b
13	1992	8.1	- 2 12	9.3	9.4	A2	3	E	39867b	63	1699	8.3	-15 58	8.7	9.8	K2	1	..	15402b
14	1808	8.1	- 7 45	8.5	8.5	B9	5	..	44407b	64	1780	8.3	-20 41	8.9	9.2	G5	1	..	20767b
15	1846	8.1	-11 7	9.7	9.7	B9	2	..	20801b	65	1805	8.3	-21 35	8.6	8.6	A2	4	..	20767b
16	1847	8.1	-11 26	8.3	9.3	Ko	4	..	20801b	66	3754	8.3	-27 41	9.3	8.3	B9	3	..	12666b
17	1845	8.1	-11 54	8.7	8.7	B9	5	..	20801b	67	4086	8.3	-30 6	8.85	8.9	G5	3	..	18926b
18	1877	8.1	-13 36	9.2	9.2	Ao	3	..	24606b	68	4081	8.3	-30 39	6.16	6.6	A5	6	0,7-	7406b
19	1828	8.1	-16 33	9.2	9.2	Ao	2	..	15402b	69	3375	8.3	-37 35	8.6	9.1	Ao	3	..	20534b
20	1776	8.1	-20 14	10.0	9.5	B9	1	..	15402b	70	3237	8.3	-38 14	8.9	9.0	Ao	3	E	20671b
21	1778	8.1	-20 28	9.1	8.9	Ao	3	..	20767b	71	1154	8.3	-57 36	8.7	9.8	Go	2	..	13007b
22	4191	8.1	-25 46	5.86	5.3	B3	..	1,7-	28,199	72	433	8.3	-76 14	10.1	10.7	G	1	..	20652b
23	3749	8.1	-27 10	6.68	6.6	B3	..	2,6	28,199	73	293	8.3	-77 47	8.1	8.7	Go	8	..	20652b
24	3398	8.1	-35 28	9.3	9.7	G5	5	..	20670b	74	1055	8.4	+57 51	8.0	8.3	Fo	6	..	37526i
25	2870	8.1	-41 32	8.6	10.2	K5	2	..	20671b	75	1419	8.4	+47 25	5.55	6.11	Go	10	..	37501i
26	2765	8.1	-48 46	5.11	7.1	K2	..	0,5-	28,199	76	1408	8.4	+45 35	6.69	7.69	Ko	7	..	37501i
27	782	8.1	-60 13	6.91	8.1	Ko	6	..	18486b	77	1516	8.4	+31 34	8.6	9.0	F5	3	..	37447i
28	243	8.2	+81 10	9.2	9.5	F2	3	..	38330i	78	1346	8.4	+28 38	8.6	9.6	Ko	1	..	38172i
29	1513	8.2	+15 33	10.0	11.0	Ko	1	..	4413m	79	1576	8.4	+24 53	6.66	6.64	B9	5	..	37472i
30	1699	8.2	+ 8 12	9.2	10.3	K2	2	..	15139b	80	..	8.4	+16 38	..	..	Go	1	..	4413m
31	1640	8.2	+ 6 56	9.7	10.3	Go	2	..	15139b	81	1598	8.4	+13 26	10.4	10.5	A3	2	..	4413m
32	1602	8.2	+ 3 36	9.0	10.1	K2	1	..	39867b	82	1467	8.4	+12 2	8.8	8.9	A2	2	..	15139b
33	1646	8.2	- 0 5	6.74	7.02	Fo	8	..	37700i	83	1571	8.4	+ 9 39	7.7	8.7	Ko	2	E	36977i
34	1601	8.2	- 1 6	9.4	9.4	Ao	3	..	39867b	84	1701	8.4	+ 8 36	8.8	9.4	Go	2	..	15139b
35	1995	8.2	- 2 8	9.7	9.7	Ao	4	..	39867b	85	1626	8.4	+ 4 18	9.4	9.4	B9	2	..	39867b
36	1810	8.2	- 7 56	8.4	9.0	Go	4	..	44407b	86	1605	8.4	+ 2 13	9.7	9.7	B9	3	..	39867b
37	1921	8.2	-11 3	10.0	11.0	Ko	1	..	24606b	87	1923	8.4	-10 32	10.0	10.3	Fo	3	..	24606b
38	1695	8.2	-15 19	8.1	7.9	B2	8	..	15402b	88	1922	8.4	-10 40	10.4	11.0	G	1	..	24606b
39	1698	8.2	-16 2	9.1	9.1	B9	2	..	15402b	89	1849	8.4	-11 4	6.01	7.01	Ko	7	..	20801b
40	1779	8.2	-20 53	9.1	8.9	Ao	2	..	20767b	90	1848	8.4	-11 27	9.7	10.8	K2	1	..	24606b
41	1750	8.2	-22 49	8.7	9.2	K2	2	..	20767b	91	1845	8.4	-12 42	9.1	9.7	Go	2	..	20801b
42	4015	8.2	-26 18	8.1	8.4	A5	5	..	12666b	92	1844	8.4	-12 46	9.1	9.9	G5	2	..	24606b
43	3417	8.2	-36 25	9.9	10.3	Ko	3	..	20670b	93	1830	8.4	-16 13	9.3	9.3	Ao	2	..	15402b
44	2991	8.2	-45 42	9.6	8.9	Ao	3	..	20858b	94	1751	8.4	-22 44	8.9	8.4	Fo	4	..	20767b
45	1202	8.2	-55 0	8.80	9.5	F5	3	..	13007b	95	3761	8.4	-27 18	6.45	7.0	A2	..	1,6	28,199
46	692	8.2	-63 35	8.8	9.8	Ko	4	..	15176b	96	3142	8.4	-40 1	10.1	10.2	F8	1	..	20671b
47	149	8.2	-83 59	9.6	9.7	A5	4	..	20557b	97	3204	8.4	-44 12	8.8	8.9	Fo	5	0,3	20671b
48	470	8.3	+68 8	8.6	8.7	A5	4	E	37713i	98	1174	8.4	-55 25	7.2	7.7	Ko	7	..	13007b
49	1039	8.3	+60 6	7.86	8.28	F5p	5	R	37526i	99	358	8.5	+71 59	9.2	9.6	F5	4	..	37559i
50	1243	8.3	+46 15	8.6	8.9	F2	3	..	37501i	100	1181	8.5	+55 4	8.86	9.42	G	1	..	37526i

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

55600

7<sup>h</sup> 8<sup>m</sup>.5

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1408	8.5	+50 17	8.4	9.4	Ko	1	..	37515i	51	1857	8.7	+ 0 2	8.58	8.86	Fo	3	..	39867b
2	1517	8.5	+31 40	8.6	8.6	Ao	3	..	37447i	52	1651	8.7	- 0 6	8.28	8.23	B8	5	..	39867b
3	1572	8.5	+ 9 16	9.4	9.5	A5	3	..	15139b	53	1800	8.7	- 3 47	9.1	10.5	Mc	2	R	44407b
4	1573	8.5	+ 9 12	9.4	10.0	G	1	..	15139b	54	1860	8.7	- 4 12	9.1	9.9	G5	2	..	44407b
5	1643	8.5	+ 7 18	8.1	8.4	Fo	4	..	15139b	55	1861	8.7	- 5 1	10.0	10.0	Ao	1	..	44407b
6	1603	8.5	- 1 54	8.72	8.67	B8	4	E	39867b	56	2026	8.7	- 5 17	9.5	9.5	Ao	3	..	44407b
7	1994	8.5	- 6 15	8.9	9.2	Fo	5	..	44407b	57	..	8.7	-10 50	..	..	A2	1	..	24606b
8	1811	8.5	- 7 25	8.9	9.4	F8	4	..	44407b	58	1849	8.7	-12 4	9.5	10.3	G5	2	..	24606b
9	1924	8.5	-10 28	9.5	10.7	K5	2	..	24606b	59	..	8.7	-12 8	..	..	Ao	2	..	24606b
10	1848	8.5	-12 18	10.0	10.3	Fo	2	..	24606b	60	1883	8.7	-13 20	9.2	9.3	A2	4	..	24606b
11	1847	8.5	-12 57	9.1	10.3	K5	1	..	24606b	61	1703	8.7	-15 7	9.2	9.5	Fo	3	..	15402b
12	1774	8.5	-14 43	8.5	8.8	Fo	6	..	24606b	62	1731	8.7	-18 53	8.6	8.7	A2	4	..	20767b
13	3418	8.5	-36 7	10.1	11.1	Ko	1	..	20670b	63	4174	8.7	-31 48	7.40	8.5	Ma	5	E	42915b
14	2980	8.5	-41 1	10.8	10.2	F2	2	..	20671b	64	3586	8.7	-33 43	10.1	8.9	A	2	E	42915b
15	2856	8.5	-47 51	9.1	8.8	Ao	3	..	20858b	65	3414	8.7	-34 5	10.3	9.5	Ao	4	..	20670b
16	698	8.6	+63 52	9.4	9.4	Ao	2	..	37526i	66	3240	8.7	-38 55	9.3	9.1	A2	4	..	20671b
17	1244	8.6	+46 16	8.2	9.2	Ko	3	..	37501i	67	296	8.8	+75 16	7.02	7.08	A2	9	..	37559i
18	1410	8.6	+45 24	8.22	8.28	A2	5	..	37501i	68	1186	8.8	+52 14	7.7	8.5	G5	3	..	37515i
19	1409	8.6	+45 14	8.0	8.6	G	2	..	37515i	69	1622	8.8	+41 33	8.1	8.7	Go	2	..	37501i
20	1495	8.6	+26 49	9.0	9.6	Go	1	..	38172i	70	1581	8.8	+35 24	10.2	10.8	Go	1	..	37447i
21	1618	8.6	+25 5	6.02	7.02	Ko	5	..	37472i	71	1343	8.8	+26 57	9.5	9.5	Ao	1	..	38172i
22	1618	8.6	+22 55	9.0	9.1	A2	2	..	38238i	72	1647	8.8	+23 16	7.8	8.8	K	2	R	38238i
23	1421	8.6	+16 44	8.3	8.3	B9	7	..	4413m	73	..	8.8	+23 15	..	..	A	..	..	..
24	..	8.6	+16 32	..	..	Ao	1	..	4413m	74	1659	8.8	+19 53	8.10	8.60	F8	4	..	38238i
25	1422	8.6	+15 57	8.3	8.6	F2	7	3,3	4413m	75	1423	8.8	+16 47	8.2	8.3	A2	7	..	4413m
26	1514	8.6	+14 58	9.31	9.37	A2	4	..	4413m	76	..	8.8	+16 37	..	..	G	1	..	4413m
27	1599	8.6	+13 39	10.4	10.5	A2	3	..	4413m	77	1605	8.8	+14 2	9.0	9.1	A2	4	0,2	4413m
28	1460	8.6	+10 46	8.5	9.6	K2	2	..	15139b	78	1574	8.8	+ 9 4	9.0	9.6	Go	2	..	15139b
29	1644	8.6	+ 7 12	8.3	8.9	Go	3	..	15139b	79	1646	8.8	+ 7 24	7.7	7.7	Ao	4	..	38971i
30	1645	8.6	+ 7 3	9.0	9.5	F8	2	..	15139b	80	1627	8.8	+ 4 45	7.60	8.38	G5	4	E	37652i
31	1606	8.6	+ 2 10	10.4	10.4	Ao	2	..	39867b	81	1606	8.8	+ 3 54	9.2	9.2	Ao	2	..	39867b
32	1737	8.6	+ 1 41	9.2	9.8	Go	2	..	37700i	82	1652	8.8	- 1 2	9.0	9.0	Ao	4	..	39867b
33	1802	8.6	- 8 41	7.46	7.60	A5	7	2,3	20801b	83	1801	8.8	- 3 20	8.6	8.7	A2	2	..	38609b
34	1775	8.6	-14 55	8.01	8.01	Ao	8	..	24606b	84	1862	8.8	- 4 59	7.50	7.50	Ao	4	R	38609i
35	1701	8.6	-15 10	10.1	10.1	Ao	1	..	15402b	85	..	8.8	- 4 59	..	..	G5	..	..	..
36	1832	8.6	-16 28	8.5	8.5	B9	4	..	15402b	86	1998	8.8	- 6 10	9.5	9.5	Ao	2	..	44407b
37	1849	8.6	-17 4	9.2	9.2	B9	2	..	15402b	87	1926	8.8	-10 19	9.3	9.3	B8	2	R	24606b
38	1848	8.6	-17 27	9.5	9.5	Ao	2	..	46170b	88	1925	8.8	-10 20	9.1	9.5	F5	2	..	24606b
39	1752	8.6	-22 41	9.1	8.9	A5	2	..	20767b	89	1851	8.8	-11 20	10.0	10.4	F5	1	..	24606b
40	3412	8.6	-34 55	9.80	9.4	A2	6	..	20670b	90	1776	8.8	-14 24	8.3	9.7	Mb	3	..	24606b
41	3420	8.6	-36 20	10.3	9.5	A3	5	..	20670b	91	1777	8.8	-15 0	9.41	9.91	F8	1	..	15402b
42	1266	8.6	-53 6	9.4	10.4	Ko	1	..	24589b	92	1782	8.8	-20 24	8.1	8.0	B3	5	..	20767b
43	860	8.6	-58 49	8.1	9.4	G5	4	..	13007b	93	5026	8.8	-24 3	7.13	8.1	G5	7	0,7-	12666b
44	787	8.6	-59 12	8.5	9.7	Ko	2	..	13007b	94	4098	8.8	-30 55	9.2	8.8	Go	3	..	18926b
45	778	8.6	-62 8	8.2	8.3	A5	5	..	18486b	95	3379	8.8	-37 8	8.6	9.1	Ao	2	..	20534b
46	391	8.7	+71 27	8.1	8.7	Go	5	..	37559i	96	3380	8.8	-38 0	7.5	8.5	G5	7	E	20671b
47	1664	8.7	+43 45	8.4	9.2	G5	3	..	37501i	97	3241	8.8	-38 37	9.5	10.4	K5	2	..	20670b
48	1685	8.7	+42 16	8.0	9.2	K5	1	..	37501i	98	2969	8.8	-46 31	9.2	9.4	F5	2	..	38414b
49	1743	8.7	+20 41	8.0	9.0	Ko	3	..	37472i	99	695	8.8	-63 38	9.3	10.1	G5	1	..	15176b
50	1575	8.7	+ 6 33	8.7	9.5	G5	3	..	15139b	100	1017	8.9	+58 14	7.36	7.64	Fo	8	..	37526i

## THE HENRY DRAPER CATALOGUE.

55700

7<sup>h</sup> 8<sup>m</sup>.9

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1056	m. 8.9	° 57 28	9.2	9.5	F	2	..	37526i	51	1609	m. 9.1	° 3 18	5.56	6.34	G5	8	E	37652i
2	1493	8.9	+48 24	8.6	8.7	A3	3	..	37515i	52	1653	9.1	- 0 48	10.4	10.5	A3	2	..	39867b
3	1687	8.9	+42 7	7.7	8.3	Go	5	..	37501i	53	1819	9.1	- 7 8	9.3	9.2	B5	4	..	44407b
4	1590	8.9	+36 42	9.0	10.0	Ko	2	..	37447i	54	1912	9.1	- 9 17	7.7	7.7	B9	7	1,2	20801b
5	1497	8.9	+26 10	8.6	8.6	A	1	..	38172i	55	1913	9.1	-10 3	9.3	9.3	B8	3	..	24606b
6	1513	8.9	+11 22	9.0	9.1	A2	3	..	15139b	56	1852	9.1	-12 43	10.4	10.4	Ao	1	..	24606b
7	1577	8.9	+ 6 55	8.7	9.0	Fo	3	..	15139b	57	1853	9.1	-12 59	10.4	10.5	A2	2	..	24606b
8	2001	8.9	- 2 44	9.1	9.1	A	2	E	39867b	58	1886	9.1	-13 20	10.6	10.7	A2	2	..	24606b
9	1803	8.9	- 3 33	7.9	8.9	Ko	1	..	38609i	59	1855	9.1	-17 35	8.3	8.3	Ao	6	..	15402b
10	1850	8.9	-12 25	10.0	11.0	Ko	1	R	24606b	60	1786	9.1	-20 57	8.4	8.6	Fo	5	..	20767b
11	1850	8.9	-12 25	10.0	11.0	Ko	1	R	24606b	61	1816	9.1	-21 32	8.5	9.2	Ko	2	..	20767b
12	1704	8.9	-15 20	9.2	9.2	B9	3	..	15402b	62	1756	9.1	-22 29	6.19	7.8	K2	5	..	42935b
13	1706	8.9	-15 38	9.5	10.1	Go	3	..	46170b	63	5098	9.1	-24 0	9.0	9.2	K5	1	3,1	12666b
14	1754	8.9	-22 42	9.2	8.4	B8	4	..	20767b	64	3772	9.1	-32 20	9.5	8.8	Ao	2	..	18926b
15	3769	8.9	-27 2	9.5	8.9	Ao	2	..	12666b	65	3419	9.1	-34 39	9.3	10.0	Ko	3	..	20670b
16	3770	8.9	-32 43	10.1	9.4	Fo	3	..	20670b	66	3411	9.1	-35 14	11.3	10.2	A3	3	..	20670b
17	3588	8.9	-33 28	8.4	9.5	K5	3	..	42915b	67	3014	9.1	-43 50	10.2	9.7	F2	3	..	20671b
18	3421	8.9	-36 22	5.94	5.7	B5	..	0,8	56,123	68	3015	9.1	-43 57	10.2	10.0	A2	3	..	20671b
19	2987	8.9	-40 19	5.40	5.9	A2	..	0,5 R	56,123	69	3210	9.1	-44 39	8.5	8.6	A2	4	..	20858b
20	2676	8.9	-49 16	7.8	7.8	G5	8	..	20858b	70	789	9.1	-60 39	8.6	9.7	G5	1	..	15176b
21	1270	8.9	-56 35	8.6	9.2	Ao	3	..	13007b	71	213	9.1	-81 37	9.8	9.8	Ao	2	..	20557b
22	569	8.9	-72 3	9.9	10.2	Fo	3	..	15168b	72	1528	9.2	+17 0	10.4	11.4	K	1	..	4413m
23	428	8.9	-74 13	9.9	10.7	G5	2	..	20652b	73	1608	9.2	+14 11	8.3	8.3	Ao	7	0,3	4413m
24	1128	9.0	+54 27	8.7	9.7	Ko	2	..	37526i	74	1579	9.2	+ 9 7	7.9	8.9	Ko	5	..	15139b
25	1420	9.0	+47 49	7.44	7.50	A2	5	..	37501i	75	1804	9.2	- 3 43	6.12	7.30	K5	5	..	38609i
26	1498	9.0	+26 4	8.2	8.7	F8	2	..	38172i	76	1914	9.2	- 9 58	9.5	9.5	B9	2	..	24606b
27	1538	9.0	+18 44	7.8	8.9	K2	2	..	37472i	77	1928	9.2	-10 16	8.0	8.3	Fo	5	..	20801b
28	1424	9.0	+16 46	9.4	9.5	A2	4	..	4413m	78	..	9.2	-12 20	..	..	Ao	2	..	24606b
29	1606	9.0	+14 44	9.0	9.1	A2	7	..	4413m	79	1837	9.2	-16 9	8.1	8.9	G5	2	..	15402b
30	1469	9.0	+12 18	5.84	6.84	Ko	8	..	36977i	80	1818	9.2	-21 10	9.1	8.9	Ao	2	..	20767b
31	1631	9.0	+ 4 23	8.5	8.6	A5	2	..	37652i	81	4019	9.2	-28 20	9.2	8.4	A5	4	2,4	18926b
32	2029	9.0	- 5 47	9.1	9.9	G5	1	..	44407b	82	3422	9.2	-34 43	10.8	10.5	F5	1	..	20670b
33	2028	9.0	- 5 56	10.0	10.0	Ao	2	..	44407b	83	3421	9.2	-34 54	10.3	10.2	A2	2	..	20670b
34	2001	9.0	- 6 28	9.1	9.9	G5	2	..	44407b	84	3427	9.2	-36 47	10.8	10.6	A	1	..	20670b
35	2000	9.0	- 6 52	9.1	10.1	Ko	1	..	44407b	85	3153	9.2	-39 23	9.3	9.4	A5	3	..	20671b
36	1805	9.0	- 8 45	7.7	7.7	Ao	5	0,2	20801b	86	2990	9.2	-40 10	8.45	8.8	Fo	6	..	20671b
37	1851	9.0	-13 0	9.7	9.8	A2	3	..	24606b	87	2883	9.2	-41 56	9.0	9.9	G5	2	..	20671b
38	1707	9.0	-15 20	9.3	9.3	Ao	2	..	15402b	88	2352	9.2	-51 7	8.5	8.7	F8	5	..	24589b
39	1759	9.0	-19 37	9.7	9.2	A3	1	..	15402b	89	862	9.2	-58 41	8.1	9.1	Ko	4	..	13007b
40	4056	9.0	-29 44	9.0	8.5	A2	3	..	18926b	90	245	9.2	-78 38	9.2	10.3	K2	5	..	20652b
41	3418	9.0	-34 53	10.8	10.5	Ao	1	..	20670b	91	1529	9.3	+17 39	9.0	9.4	F5	5	..	4413m
42	3426	9.0	-36 4	8.3	8.0	Ao	3	..	7406b	92	1464	9.3	+10 10	8.92	9.42	F8	3	..	15139b
43	3013	9.0	-43 44	9.8	9.4	Ao	4	..	20671b	93	1597	9.3	+ 5 27	7.7	7.7	B8	6	1,7	37652i
44	1271	9.0	-56 31	9.1	9.8	A	1	..	13007b	94	1609	9.3	- 1 45	10.4	10.5	A2	3	..	39867b
45	493	9.1	+66 56	7.62	8.12	F8	6	0,5-	38155i	95	2003	9.3	- 2 8	9.3	9.3	A	3	..	39867b
46	1691	9.1	+36 58	8.1	8.2	A3	8	..	37447i	96	1888	9.3	-13 13	9.3	10.4	K2	1	..	24606b
47	1425	9.1	+16 8	10.4	10.4	Ao	3	..	4413m	97	1856	9.3	-17 21	8.9	9.0	A3	3	..	15402b
48	..	9.1	+15 7	..	..	A3	1	..	4413m	98	2867	9.3	-47 14	9.8	9.4	A2	1	..	20858b
49	1603	9.1	+13 46	9.7	10.1	F5	3	..	4413m	99	782	9.3	-62 51	9.4	9.9	F8	2	..	15176b
50	1708	9.1	+ 8 13	7.9	7.9	Ao	5	..	38971i	100	294	9.3	-78 2	9.8	10.1	Fo	3	..	20652b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

55800

7h 9m.4

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1583	m. 9.4	+ 24 2	7.7	8.5	G5	2	..	38238i	51	1583	m. 9.6	+ 6 54	8.2	8.2	Ao	3	..	37700i
2	1426	9.4	+ 16 51	8.4	8.4	Ao	6	0,2	4413m	52	1823	9.6	- 7 24	8.9	8.9	Ao	3	..	44407b
3	1605	9.4	+ 13 55	9.4	10.6	K5	1	..	4413m	53	1923	9.6	- 10 2	9.5	9.5	B8	3	..	24606b
4	1466	9.4	+ 10 12	9.4	9.4	Ao	4	..	15139b	54	1860	9.6	- 12 38	7.8	7.8	B8	8	..	20801b
5	1650	9.4	+ 7 24	7.9	9.0	K2	2	..	37700i	55	1735	9.6	- 18 6	9.1	9.2	A3	3	..	15402b
6	1613	9.4	+ 3 4	8.8	8.8	B9	3	..	39867b	56	1761	9.6	- 22 44	6.24	6.1	B3	..	0,8	28,199
7	1861	9.4	+ 0 29	9.4	9.5	A5	2	..	37700i	57	3789	9.6	- 27 11	5.86	5.9	B3	..	0,8	28,199
8	1610	9.4	- 1 36	8.3	8.3	B9	7	..	39867b	58	3790	9.6	- 27 19	10.4	8.9	A	1	..	12666b
9	1810	9.4	- 8 15	9.1	9.1	Ao	1	..	38609i	59	3782	9.6	- 33 0	8.6	8.6	G5	5	..	42915b
10	1916	9.4	- 9 4	8.5	9.7	K5	2	..	44407b	60	2993	9.6	- 40 13	8.00	9.0	Ko	6	..	20671b
11	1918	9.4	- 9 25	9.3	9.3	B9	4	..	24606b	61	3023	9.6	- 43 42	8.2	8.3	Fo	4	..	20858b
12	1930	9.4	- 10 16	9.5	9.5	B8	2	..	24606b	62	2782	9.6	- 49 0	8.0	8.2	F2	7	..	20858b
13	1890	9.4	- 13 23	10.2	11.2	Ko	1	..	24606b	63	1208	9.6	- 54 6	9.0	9.5	A5	3	3,3	12757b
14	1889	9.4	- 13 33	10.4	10.4	Ao	1	..	24606b	64	600	9.6	- 70 20	5.81	6.37	Go	..	R	28,199
15	1709	9.4	- 15 26	8.7	8.8	A2	5	..	15402b	65	..	9.6	- 70 20	3.87	4.87	Ko	..	R	28,199
16	1819	9.4	- 21 17	8.7	8.5	Ao	5	..	20767b	66	1188	9.7	+ 52 18	6.04	7.04	Ko	8	..	37515i
17	4123	9.4	- 30 47	8.1	7.3	B9	3	..	8905b	67	1624	9.7	+ 41 3	9.0	9.4	F5	1	..	37501i
18	3596	9.4	- 33 37	9.5	8.6	Ao	4	..	42915b	68	1521	9.7	+ 31 2	8.6	8.7	A2	3	0,2	37447i
19	3037	9.4	- 42 41	10.0	9.9	F5	2	..	20671b	69	1489	9.7	+ 29 26	8.0	8.0	B8	7	..	38172i
20	423	9.4	- 75 40	9.4	9.9	F8	4	..	20652b	70	1350	9.7	+ 28 5	5.87	7.22	Ma	8	..	38172i
21	1510	9.5	+ 32 37	8.4	9.5	K2	3	..	37447i	71	1622	9.7	+ 22 43	8.7	8.7	Ao	2	..	38238i
22	1662	9.5	+ 19 15	7.7	7.8	A5	2	..	38238i	72	1428	9.7	+ 16 36	9.7	10.7	Ko	2	..	4413m
23	1661	9.5	+ 19 0	7.7	7.8	A3	3	..	37472i	73	1581	9.7	+ 9 2	8.4	8.5	A5	4	..	15139b
24	1530	9.5	+ 17 7	9.2	10.2	Ko	4	..	4413m	74	1584	9.7	+ 6 16	8.5	9.0	F8	4	..	15139b
25	1514	9.5	+ 11 11	7.8	7.9	A2	3	..	36977i	75	1601	9.7	+ 5 43	8.7	8.7	B9	3	..	37700i
26	1580	9.5	+ 9 2	8.4	8.4	Ao	6	..	15139b	76	1602	9.7	+ 4 59	7.41	8.19	G5	6	0,5	37700i
27	1599	9.5	+ 5 36	9.0	9.1	A2	4	..	15139b	77	1637	9.7	+ 4 40	9.7	9.7	Ao	3	..	39867b
28	1635	9.5	+ 4 20	8.3	9.7	Ma	2	E	37652i	78	1866	9.7	+ 0 24	8.7	8.8	A3	2	..	37700i
29	1634	9.5	+ 4 1	8.4	9.2	G5	2	E	37652i	79	1933	9.7	- 10 8	5.99	5.77	B1	..	0,7	56,83
30	1822	9.5	- 7 12	8.7	8.7	Ao	5	0,2	44407b	80	..	9.7	- 11 27	..	..	Ao	1	..	24606b
31	1821	9.5	- 7 20	8.4	8.4	B8	5	..	44407b	81	1861	9.7	- 12 21	9.1	9.2	A2	2	..	20801b
32	1921	9.5	- 9 46	6.06	7.13	K2	7	..	20801b	82	1862	9.7	- 12 34	10.0	10.3	F2	2	..	24606b
33	1858	9.5	- 12 46	10.6	10.6	Ao	2	..	24606b	83	1892	9.7	- 13 19	10.4	10.4	Ao	2	..	24606b
34	1789	9.5	- 20 16	9.5	9.1	B9	2	..	15402b	84	1891	9.7	- 13 30	10.0	10.0	Ao	3	..	24606b
35	1791	9.5	- 20 58	9.2	8.8	B9	3	..	20767b	85	1712	9.7	- 15 13	9.7	9.5	B	3	..	46170b
36	4029	9.5	- 29 0	7.7	7.5	A3	6	1,6	8905b	86	1839	9.7	- 16 30	9.1	9.1	Ao	1	..	15402b
37	3777	9.5	- 32 39	8.6	9.4	Ko	4	..	42915b	87	1864	9.7	- 17 47	9.1	9.2	A2	4	..	15402b
38	3427	9.5	- 34 38	7.9	10.0	K5	3	..	20670b	88	1792	9.7	- 20 21	9.1	9.1	Ao	1	..	15402b
39	3417	9.5	- 35 29	10.3	9.7	A3	5	..	20670b	89	4031	9.7	- 28 26	8.1	9.0	K2	1	..	12666b
40	3434	9.5	- 36 42	10.8	10.3	A2	2	..	20670b	90	3388	9.7	- 37 48	10.8	10.3	B9	3	..	20670b
41	2992	9.5	- 40 38	9.5	10.5	Ko	2	..	20671b	91	3161	9.7	- 39 20	9.0	9.7	K5	2	..	20671b
42	2884	9.5	- 41 18	10.1	10.2	G5	2	..	20671b	92	2977	9.7	- 46 35	4.47	4.75	Fo	..	0,9 R	28,199
43	2353	9.5	- 51 51	9.0	8.7	F5	5	..	24589b	93	628	9.8	+ 64 18	8.0	9.0	Ko	5	..	37545i
44	677	9.5	- 64 17	8.4	8.4	Ao	6	..	15223b	94	1500	9.8	+ 48 39	7.8	7.9	A2	5	E	37501i
45	424	9.5	- 75 20	9.5	10.5	Ko	2	..	20652b	95	..	9.8	+ 17 42	..	..	Ko	2	..	4413m
46	953	9.6	+ 61 14	9.2	9.8	G	2	..	37526i	96	1518	9.8	+ 15 27	9.7	9.8	A2	4	..	4413m
47	1620	9.6	+ 22 9	7.38	8.56	K5	3	..	38238i	97	1709	9.8	+ 8 54	10.0	10.0	Ao	2	..	15139b
48	1515	9.6	+ 15 25	7.9	8.9	Ko	7	5,1	4413m	98	1743	9.8	+ 1 49	8.1	9.1	Ko	2	..	37700i
49	1516	9.6	+ 15 19	9.7	9.7	A	4	..	4413m	99	1612	9.8	- 1 12	7.9	8.5	Go	5	R	39867b
50	1517	9.6	+ 11 16	8.3	8.6	Fo	2	..	36977i	100	..	9.8	- 1 12	..	..	A3	..	..	..

## THE HENRY DRAPER CATALOGUE.

55900

7<sup>h</sup> 9<sup>m</sup>.8

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1934	9.8	-10 6	8.36	8.12	B	3	R	20801b	51	2008	10.0	- 2 38	7.9	8.0	A2	4	..	38609i
2	1853	9.8	-12 3	8.6	8.6	B9	4	..	20801b	52	2007	10.0	- 2 58	9.1	9.1	A0	2	2,2	44407b
3	1714	9.8	-15 20	8.9	9.9	K0	2	..	46170b	53	1933	10.0	- 9 48	9.2	10.0	G5	2	..	24606b
4	1740	9.8	-18 48	7.9	8.2	F2	7	3,3	20767b	54	1855	10.0	-11 46	9.7	10.7	K0	1	..	24606b
5	5116	9.8	-23 30	7.5	8.0	K0	4	0,2	12666b	55	1895	10.0	-13 58	9.2	9.6	F5	3	..	24606b
6	3794	9.8	-27 7	8.9	8.3	B8	4	..	12666b	56	1718	10.0	-15 18	9.1	9.1	B9	5	..	15402b
7	3793	9.8	-27 19	10.4	8.9	A	1	..	12666b	57	1796	10.0	-20 44	8.5	8.3	A3	4	..	20767b
8	3419	9.8	-35 58	10.8	10.3	F0	2	..	20670b	58	4143	10.0	-30 54	6.53	6.8	B3	6	0,7	7406b
9	3163	9.8	-39 58	8.50	9.0	F5	6	..	20671b	59	3607	10.0	-33 29	9.3	8.9	F	3	..	42915b
10	3028	9.8	-43 42	7.34	6.9	A0	8	..	20858b	60	3433	10.0	-34 14	10.6	9.5	A2	5	..	20670b
11	2876	9.8	-47 59	9.8	9.1	A0	2	..	20858b	61	3441	10.0	-36 9	10.6	10.9	K2	1	..	20670b
12	2685	9.8	-49 9	7.8	8.8	K2	4	..	20858b	62	3440	10.0	-36 58	10.1	10.0	A5	4	..	20670b
13	1276	9.8	-53 2	9.0	9.9	K0	2	..	24589b	63	2998	10.0	-40 37	9.9	10.5	Ma	2	..	20671b
14	100	9.8	-85 37	10.3	10.4	A2	3	..	22238b	64	1185	10.0	-55 59	6.64	7.5	K0	8	..	13007b
15	233	9.9	+79 18	8.6	9.6	K0	3	0,2	38330i	65	712	10.0	-65 25	9.2	10.4	K5	1	..	15223b
16	1307	9.9	+51 50	8.4	8.4	A0	4	..	37515i	66	201	10.1	+82 36	5.11	6.46	Mb	..	5,8	1699c
17	1823	9.9	+40 11	8.4	9.5	K2	1	..	37501i	67	250	10.1	+78 27	7.30	8.30	K0	4	..	37559i
18	1584	9.9	+35 12	8.6	9.4	G5	4	..	37447i	68	918	10.1	+62 6	8.6	9.7	K2	2	..	37526i
19	1751	9.9	+20 2	7.50	7.48	B9	5	..	37472i	69	1246	10.1	+46 30	8.0	9.0	K0	4	..	37501i
20	1608	9.9	+13 45	10.4	10.4	A0	3	..	4413m	70	1668	10.1	+43 30	9.2	9.2	A0	2	..	37501i
21	1710	9.9	+ 8 34	8.2	9.3	K2	3	..	15139b	71	1466	10.1	+30 54	8.8	9.3	F8	3	3,2	37447i
22	1585	9.9	+ 6 0	7.4	7.4	A0	6	1,8	37652i	72	1753	10.1	+20 36	8.8	9.9	K2	1	..	38238i
23	1613	9.9	+ 1 55	8.82	9.89	K2	2	..	39867b	73	1583	10.1	+ 9 41	7.10	7.44	F2	4	E	36977i
24	2006	9.9	+ 2 14	9.5	9.5	A0	1	..	39867b	74	1653	10.1	+ 7 9	8.8	9.6	G5	1	..	15139b
25	2009	9.9	+ 6 28	9.1	9.4	F0	3	..	44407b	75	1586	10.1	+ 6 48	8.3	9.4	K2	2	..	15139b
26	1814	9.9	+ 8 36	9.5	9.6	A2	3	..	44407b	76	1605	10.1	+ 5 30	9.4	10.2	G5	1	..	15139b
27	1813	9.9	+ 8 44	8.9	9.5	Go	1	..	44407b	77	1615	10.1	+ 3 44	8.7	9.3	Go	3	..	37700i
28	1931	9.9	+ 9 36	9.2	9.2	A0	4	..	24606b	78	1615	10.1	+ 2 15	8.8	10.0	K5	1	..	39867b
29	1928	9.9	+ 9 42	8.5	8.9	F5	3	..	20801b	79	1868	10.1	+ 0 8	9.0	9.1	A2	3	..	37700i
30	1929	9.9	+10 2	9.2	9.2	B9	3	..	20801b	80	1817	10.1	- 8 40	9.7	10.3	Go	1	..	44407b
31	1936	9.9	+10 22	9.2	9.2	A0	4	..	20801b	81	1937	10.1	-10 48	10.0	10.0	B9	3	..	24606b
32	1784	9.9	+14 23	8.9	9.3	F5	7	..	24606b	82	1856	10.1	-11 12	9.7	10.7	K0	2	..	24606b
33	1743	9.9	+18 15	8.1	7.9	B8	6	1,3-	46170b	83	1896	10.1	-13 12	10.4	10.7	F0	2	..	24606b
34	4243	9.9	+25 56	8.9	9.3	Ma	1	..	12666b	84	1825	10.1	-21 47	9.2	8.9	Go	2	..	18301b
35	3605	9.9	+34 1	9.9	9.7	Go	2	..	20670b	85	4146	10.1	-30 10	6.31	6.6	B3	8	..	8905b
36	3166	9.9	+39 54	9.60	9.6	F0	2	..	20671b	86	3442	10.1	-36 46	10.3	10.7	G5	2	..	20670b
37	3042	9.9	+42 50	10.5	9.7	B8	3	..	20671b	87	3254	10.1	-38 19	7.33	7.7	A2	2	2,10	7406b
38	3029	9.9	+43 29	8.9	9.4	K0	2	..	20556b	88	3168	10.1	-39 19	9.9	10.1	G	1	R	20670b
39	3218	9.9	+44 52	8.2	9.3	K5	2	..	20858b	89	3003	10.1	-40 18	10.6	9.6	B9	3	..	20671b
40	2686	9.9	+49 39	7.8	8.8	K0	8	..	24589b	90	3001	10.1	-40 21	9.5	10.2	K0	1	..	20671b
41	2634	9.9	+50 8	7.99	9.1	Mb	5	..	24589b	91	3032	10.1	-43 45	9.8	8.8	A2	2	..	20858b
42	296	9.9	+77 55	10.2	10.3	A5	3	..	20652b	92	1129	10.2	+54 44	9.7	9.7	A	1	..	37526i
43	472	10.0	+68 44	7.84	7.98	A5	6	0,4-	37713i	93	1501	10.2	+48 38	8.9	9.0	A2	3	..	37515i
44	1067	10.0	+59 6	7.43	7.71	F0	8	..	37526i	94	1695	10.2	+37 10	9.4	9.5	A3	4	..	37447i
45	1694	10.0	+37 24	9.1	10.3	K5	3	..	37447i	95	1496	10.2	+33 55	8.6	8.6	A0	6	..	37447i
46	1615	10.0	+14 2	8.2	9.2	K0	6	0,1	4413m	96	1491	10.2	+29 25	9.4	9.7	F2	1	..	38172i
47	1638	10.0	+ 4 40	8.5	9.5	K0	4	..	39867b	97	1429	10.2	+16 55	8.4	8.7	F0	5	R	4413m
48	1639	10.0	+ 4 37	10.4	10.5	A2	1	..	39867b	98	1429	10.2	+16 55	8.4	8.7	F0	5	..	4413m
49	1612	10.0	+ 2 48	10.4	10.4	A0	2	..	39867b	99	1520	10.2	+15 0	8.34	9.52	K5	5	3,1	4413m
50	1746	10.0	+ 1 12	8.7	9.2	F8	2	..	37700i	100	1654	10.2	+ 7 32	9.0	9.0	A0	4	..	15139b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

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7<sup>h</sup> 10<sup>m</sup>.2

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1869	10.2	+ 0 48	8.39	9.74	Ma	..	..	M	51	1515	10.4	+32 7	8.6	8.6	Ao	2	..	37447i
2	1870	10.2	+ 0 23	9.0	9.4	F5	3	..	39867b	52	1430	10.4	+16 52	10.4	10.5	A2	3	..	4413m
3	1871	10.2	+ 0 2	6.52	7.30	G5	7	..	3770oi	53	..	10.4	+16 37	..	..	A3	1	..	4413m
4	1872	10.2	- 4 24	9.2	9.2	Ao	2	..	44407b	54	..	10.4	+14 49	..	..	A	1	..	4413m
5	2012	10.2	- 6 57	9.7	9.7	Ao	2	..	44407b	55	1873	10.4	+ 0 39	9.0	9.1	A2	3	..	3770oi
6	1829	10.2	- 7 30	7.7	7.7	B8	4	..	38609i	56	..	10.4	- 0 53	..	..	Ao	1	..	39867b
7	1818	10.2	- 8 53	9.3	9.3	B8	3	..	44407b	57	1656	10.4	- 0 59	8.3	9.3	Ko	5	..	39867b
8	1936	10.2	- 9 12	9.5	9.5	B9	3	..	24606b	58	1617	10.4	- 1 46	8.7	9.0	Fo	2	..	39867b
9	1935	10.2	-10 0	9.19	10.19	Ko	2	..	24606b	59	1873	10.4	- 4 53	8.1	9.1	Ko	2	..	38609i
10	1938	10.2	-10 45	10.0	10.1	A2	2	..	24606b	60	2015	10.4	- 6 46	9.3	9.4	A3	3	..	44407b
11	1857	10.2	-11 56	10.0	10.3	Fo	2	..	24606b	61	1940	10.4	- 9 52	9.5	10.1	Go	2	..	24606b
12	1720	10.2	-15 18	7.05	7.55	F8	8	..	15402b	62	1788	10.4	-14 58	10.4	10.4	Ao	2	..	4617ob
13	1767	10.2	-19 48	7.29	6.9	B3	8	..	20767b	63	1845	10.4	-16 56	9.1	9.2	A2	2	..	15402b
14	4057	10.2	-26 10	4.66	4.54	B5p	..	3, R	28,199	64	1802	10.4	-20 16	9.2	8.9	Ao	2	..	20767b
15	3805	10.2	-27 33	8.9	8.6	K2	2	..	12666b	65	5135	10.4	-23 46	9.7	8.6	B9	4	1,2	20767b
16	4040	10.2	-28 20	8.5	8.3	Ao	5	2,5	18926b	66	5064	10.4	-24 46	9.5	8.4	B8	4	..	12666b
17	3610	10.2	-33 9	7.63	8.6	K2	6	..	42915b	67	4256	10.4	-25 7	7.44	7.4	B8	4	..	42935b
18	3437	10.2	-34 57	10.8	10.5	A2	2	..	2067ob	68	3800	10.4	-32 16	7.9	8.8	Ko	4	..	42915b
19	3426	10.2	-35 8	8.65	9.5	K5	4	..	2067ob	69	3447	10.4	-36 7	11.7	10.9	A2	2	..	2067ob
20	3427	10.2	-35 17	9.3	9.7	F5	3	..	2067ob	70	3394	10.4	-37 15	8.6	10.3	Ko	3	..	2067ob
21	2891	10.2	-41 53	10.1	9.3	B9	4	..	20671b	71	3393	10.4	-37 46	9.9	10.7	K5	2	..	2067ob
22	3223	10.2	-45 0	5.04	5.04	Aop	..	1, R	28,199	72	3048	10.4	-42 4	10.0	10.1	Go	2	..	20671b
23	2360	10.2	-51 2	7.2	7.4	B5	3	..	8951b	73	2793	10.4	-48 37	8.6	8.4	Ao	6	..	20858b
24	867	10.2	-58 41	8.3	8.8	B8	5	..	13007b	74	1113	10.4	-52 31	9.1	10.2	K2	3	..	24589b
25	781	10.2	-61 40	9.1	9.5	Fo	2	..	15176b	75	714	10.4	-65 36	9.8	9.9	A5	3	..	15223b
26	699	10.2	-63 48	10.2	10.2	A	1	..	15176b	76	246	10.4	-78 16	9.5	10.3	G5	4	..	20652b
27	573	10.2	-72 9	9.2	9.5	Fo	4	..	15168b	77	1590	10.5	+24 4	8.4	8.9	F8	3	..	37472i
28	1669	10.3	+43 48	9.5	9.5	A	1	..	37501i	78	1616	10.5	+14 49	10.0	10.0	Ao	3	..	4413m
29	1468	10.3	+30 6	9.06	9.62	G	1	E	38172i	79	1586	10.5	+ 9 54	7.97	9.04	K2	4	..	15139b
30	1522	10.3	+15 32	8.3	8.8	F8	7	2,2	4413m	80	1714	10.5	+ 8 24	8.2	9.4	K5	1	..	15139b
31	1712	10.3	+ 8 10	5.97	7.32	Mb	6	0,7	3770oi	81	1607	10.5	+ 5 6	9.0	10.1	K2	2	..	15139b
32	1655	10.3	+ 7 47	8.8	8.8	B8	5	..	15139b	82	1657	10.5	- 0 8	10.4	10.4	Ao	1	..	39867b
33	1587	10.3	+ 6 6	8.3	9.7	Ma	2	..	15139b	83	1618	10.5	- 1 40	7.7	8.3	Go	6	..	39867b
34	1640	10.3	+ 4 42	9.4	9.5	A2	3	..	39867b	84	1938	10.5	- 9 8	9.7	10.3	Go	1	..	24606b
35	1617	10.3	+ 3 24	9.0	9.4	F5	2	..	3770oi	85	1941	10.5	- 9 17	10.4	10.4	B9	2	..	24606b
36	1749	10.3	+ 0 58	8.14	8.56	F5	4	..	3770oi	86	1940	10.5	-10 53	9.5	9.5	B9	2	..	24606b
37	2037	10.3	- 5 50	8.3	9.1	G5	4	..	44407b	87	1859	10.5	-11 35	10.6	10.6	Ao	2	..	24606b
38	1939	10.3	-10 20	10.1	10.1	B9	2	..	24606b	88	1860	10.5	-11 49	10.2	10.3	A2	3	..	24606b
39	1858	10.3	-11 42	8.3	8.3	B8	5	..	20801b	89	1864	10.5	-12 59	10.4	10.4	Ao	1	..	24606b
40	1721	10.3	-15 58	9.2	10.2	Ko	1	..	4617ob	90	1723	10.5	-15 5	9.5	10.1	Go	2	..	4617ob
41	1765	10.3	-22 22	9.1	8.9	G5	2	..	18301b	91	1848	10.5	-16 39	10.2	10.3	A2	1	..	15402b
42	1764	10.3	-22 46	8.5	8.5	G5	4	..	18301b	92	1772	10.5	-19 48	9.2	8.8	F8	2	..	20767b
43	5059	10.3	-24 41	8.3	8.9	K2	2	..	12666b	93	1804	10.5	-20 50	8.1	8.2	B8	6	..	20767b
44	3806	10.3	-27 59	8.1	7.4	B8	6	3,7-	12666b	94	5137	10.5	-23 18	7.7	7.0	B3	7	..	42935b
45	4094	10.3	-29 45	8.7	8.3	Ao	4	..	18926b	95	3037	10.5	-43 55	10.0	9.7	Fo	2	..	20671b
46	4209	10.3	-31 28	7.4	7.5	B9	3	..	8905b	96	3227	10.5	-44 29	var.	var.	Md	..	R	28,199
47	3429	10.3	-35 54	8.9	8.8	A3	8	..	2067ob	97	1213	10.5	-54 25	9.0	9.2	Ao	4	..	12757b
48	3392	10.3	-37 36	10.6	10.6	A2	2	..	2067ob	98	234	10.6	+79 30	8.8	9.9	K2	1	..	3830oi
49	102	10.4	+86 33	9.4	9.4	Ao	2	..	37546i	99	1068	10.6	+59 18	7.63	8.13	F8	8	..	37526i
50	565	10.4	+64 58	9.20	9.76	G	3	E	37545i	100	1592	10.6	+36 43	9.5	9.6	A2	3	..	37447i



THE HENRY DRAPER CATALOGUE.

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7<sup>h</sup> 10<sup>m</sup>.6

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1567	10.6	+34 12	8.8	8.8	Ao	7	R	37447i	51	1516	10.8	+32 8	7.8	8.8	Ko	5	..	37447i
2	1431	10.6	+15 58	10.0	10.1	A3	2	..	4413m	52	1592	10.8	+24 43	7.01	7.01	Ao	5	..	37472i
3	1469	10.6	+10 26	8.5	8.8	Fo	3	..	15139b	53	1477	10.8	+12 38	9.0	9.1	A3	2	E	15139b
4	1715	10.6	+8 0	9.2	9.3	A2	2	..	15139b	54	..	10.8	-0 34	..	..	Ao	2	..	39867b
5	1659	10.6	+7 25	9.7	10.1	F5	2	..	15139b	55	..	10.8	-11 13	..	..	A2	2	..	24606b
6	..	10.6	+5 47	..	..	A2	1	..	15139b	56	..	10.8	-11 39	..	..	Ao	1	..	24606b
7	1659	10.6	-0 49	8.7	9.7	Ko	4	..	39867b	57	1901	10.8	-13 37	8.7	10.1	Ma	2	..	20801b
8	1817	10.6	-3 30	9.5	9.5	Ao	2	..	44407b	58	1727	10.8	-15 48	9.7	10.1	F5	1	..	15402b
9	1941	10.6	-10 42	10.0	10.3	Fo	3	..	24606b	59	1767	10.8	-22 35	7.9	8.6	Ma	4	..	18301b
10	1790	10.6	-14 26	7.16	8.16	Ko	7	0,8	20801b	60	4074	10.8	-26 51	5.80	7.3	K5	..	0,5	28,199
11	1789	10.6	-14 39	10.0	10.0	Ao	4	2,2	24606b	61	4164	10.8	-30 28	6.94	7.9	Ko	3	..	8905b
12	1744	10.6	-18 46	9.2	9.3	A2	2	..	20767b	62	4224	10.8	-31 20	7.8	7.6	B9	8	3,2	42915b
13	3450	10.6	-36 9	10.6	10.0	F8	3	..	20670b	63	3455	10.8	-36 53	8.9	9.5	Ko	6	..	20670b
14	3176	10.6	-40 3	8.00	9.3	Ko	5	..	20671b	64	3008	10.8	-40 38	10.6	10.2	F	2	..	20671b
15	2897	10.6	-41 31	9.0	9.6	F5	3	..	20671b	65	2987	10.8	-46 26	9.0	8.7	Ao	3	..	20858b
16	1163	10.6	-57 23	8.2	8.9	B9	4	..	13007b	66	2692	10.8	-49 51	10.2	9.4	A2	4	..	24589b
17	869	10.6	-58 15	7.6	8.6	Fo	6	..	13007b	67	417	10.9	+69 52	var.	var.	Ko	3	R	38155i
18	659	10.6	-66 10	9.2	9.8	Go	2	..	15223b	68	483	10.9	+67 51	8.6	9.6	Ko	4	..	38155i
19	1411	10.7	+50 41	7.8	7.8	Ao	6	..	37515i	69	1612	10.9	+49 38	4.80	4.86	A2	..	1,10	56,83
20	1504	10.7	+48 42	9.2	10.6	Mc	..	..	56,215	70	1690	10.9	+41 59	8.4	9.4	Ko	1	..	37501i
21	1427	10.7	+47 40	9.2	9.2	Ao	1	..	37515i	71	1908	10.9	+39 5	6.59	7.59	Ko	8	0,8	37447i
22	1628	10.7	+41 8	7.46	8.46	Ko	5	..	37501i	72	1587	10.9	+35 17	9.1	10.1	Ko	1	..	37447i
23	1593	10.7	+36 11	7.7	8.7	Ko	6	..	37447i	73	1499	10.9	+33 23	9.0	10.0	Ko	3	..	37447i
24	1497	10.7	+33 17	6.90	7.46	Go	8	..	37447i	74	1498	10.9	+33 13	8.6	9.4	G5	3	..	37447i
25	1617	10.7	+14 34	9.2	9.6	F5	3	..	4413m	75	1525	10.9	+31 30	9.4	9.5	A2	2	..	37447i
26	1470	10.7	+10 11	8.37	9.15	G5	4	..	15139b	76	1508	10.9	+26 53	6.51	7.29	G5	7	..	38172i
27	1589	10.7	+6 6	8.3	8.3	Ao	6	0,4	15139b	77	1610	10.9	+5 47	8.7	8.7	Ao	5	0,3	15139b
28	1660	10.7	-0 25	9.0	9.3	F2	4	..	39867b	78	1619	10.9	+3 9	10.0	10.3	F	1	..	39867b
29	1818	10.7	-3 12	8.5	9.6	K2	2	..	44407b	79	1752	10.9	+1 38	9.7	9.7	Ao	2	..	39867b
30	1877	10.7	-4 30	9.7	9.7	B9	2	..	44407b	80	1820	10.9	-3 44	9.2	9.2	Ao	3	..	44407b
31	2016	10.7	-6 54	8.6	9.8	K5	2	..	44407b	81	1878	10.9	-4 15	9.3	9.3	Ao	1	..	44407b
32	1835	10.7	-7 18	9.0	9.0	B9	2	..	44407b	82	1943	10.9	-9 27	10.1	10.1	Ao	3	..	24606b
33	1944	10.7	-10 14	9.7	9.7	B9	3	..	24606b	83	1902	10.9	-13 23	8.7	8.7	B8	5	..	20801b
34	1943	10.7	-10 42	8.7	9.7	Ko	4	..	24606b	84	1769	10.9	-22 48	8.7	8.5	Ao	4	..	18301b
35	1899	10.7	-13 13	9.2	10.0	G5	2	..	24606b	85	4267	10.9	-25 34	9.5	8.9	A	1	..	12666b
36	1776	10.7	-19 48	8.6	8.8	F8	2	..	20767b	86	3807	10.9	-32 24	7.9	8.3	Go	7	..	42915b
37	1831	10.7	-21 42	7.7	R	Ko	5	..	18301b	87	3456	10.9	-36 40	10.3	9.7	A3	4	..	20670b
38	5072	10.7	-24 12	8.3	9.2	K5	1	..	12666b	88	3402	10.9	-37 45	11.3	10.6	F5	2	..	20670b
39	4073	10.7	-26 35	3.83	3.66	B3p	..	2,R	28,199	89	3403	10.9	-38 1	10.3	10.2	F2	3	..	20670b
40	3615	10.7	-33 15	8.6	8.3	Ao	7	..	42915b	90	3009	10.9	-40 23	9.9	10.1	Go	2	..	20671b
41	3616	10.7	-33 25	8.4	8.9	Ko	4	..	42915b	91	3029	10.9	-45 35	9.2	9.9	K5	2	..	20671b
42	3451	10.7	-36 15	7.14	8.3	F5	3	..	7406b	92	2988	10.9	-46 25	10.2	9.4	A	1	..	20858b
43	3256	10.7	-38 52	9.3	9.3	Fo	5	..	20671b	93	870	10.9	-58 5	8.8	9.5	F5	2	..	13007b
44	2364	10.7	-51 6	8.5	9.6	G5	4	..	24589b	94	661	10.9	-66 54	8.2	9.0	G5	7	..	15223b
45	1280	10.7	-53 44	8.0	8.6	F8	3	..	10697b	95	251	11.0	+78 15	7.10	7.10	Ao	6	..	38187i
46	793	10.7	-59 41	7.9	8.1	B8	4	..	18486b	96	566	11.0	+65 38	9.4	10.2	G5	3	E	37545i
47	603	10.7	-70 31	10.1	10.2	A5	3	..	15168b	97	1428	11.0	+47 28	8.4	8.8	F5	3	..	37501i
48	954	10.8	+61 47	8.6	8.9	Fo	4	..	37526i	98	1594	11.0	+36 44	9.5	10.5	Ko	3	..	37447i
49	1415	10.8	+45 18	7.62	7.96	F2	7	..	37501i	99	1560	11.0	+21 56	9.0	9.8	G5	1	..	37472i
50	1610	10.8	+44 46	9.17	10.24	K2	1	..	37501i	100	1433	11.0	+16 18	6.83	7.25	F5	5	0,9	37472i

JOHN G. WOLFECH LIBRARY,  
HARVARD COLLEGE OBSERVATORY,  
CAMBRIDGE, MASS. 02138



## ANNALS OF HARVARD COLLEGE OBSERVATORY.

56200

7<sup>h</sup> 11<sup>m</sup>.0

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1590	11.0	+ 6 26	9.7	9.7	Ao	2	..	15139b	51	2044	11.2	- 5 37	9.1	10.2	K2	1	..	44407b
2	1611	11.0	+ 5 16	8.2	9.0	G5	3	..	37700i	52	..	11.2	- 9 13	..	..	Ao	1	..	24606b
3	2018	11.0	- 6 25	9.1	10.1	Ko	2	..	44407b	53	1948	11.2	-10 9	10.0	10.8	G5	1	..	24606b
4	2019	11.0	- 6 35	8.9	8.9	B9	1	..	38609i	54	1949	11.2	-10 20	10.0	10.0	B9	2	..	24606b
5	1944	11.0	- 9 21	10.4	10.4	Ao	3	..	24606b	55	1950	11.2	-10 56	9.5	9.6	A3	3	..	24606b
6	..	11.0	- 9 51	..	..	Ao	1	..	24606b	56	1863	11.2	-11 5	8.4	9.4	Ko	3	..	24606b
7	1945	11.0	-10 24	6.09	7.09	Ko	8	..	20801b	57	1904	11.2	-13 6	8.5	8.5	B9	4	..	20801b
8	1793	11.0	-14 53	9.3	9.3	B9	2	..	15402b	58	4117	11.2	-30 1	8.65	8.5	F5	3	..	18926b
9	1777	11.0	-19 40	9.5	8.9	A3	2	..	20767b	59	3813	11.2	-32 38	8.6	8.9	Go	3	..	42915b
10	1835	11.0	-21 47	8.7	8.8	Fo	4	..	18301b	60	3408	11.2	-37 10	9.2	9.5	F5	5	..	20670b
11	4057	11.0	-28 48	7.4	7.0	B3p	7	0.8 R	8905b	61	3184	11.2	-39 28	9.9	10.2	Ko	1	..	20670b
12	3618	11.0	-33 47	10.3	10.0	Fo	2	..	20670b	62	3010	11.2	-40 46	9.2	10.2	K2	3	..	20671b
13	3442	11.0	-36 0	8.9	8.9	B8	7	..	20670b	63	3059	11.2	-42 3	10.5	10.2	Go	1	..	20671b
14	3404	11.0	-37 20	10.3	10.3	A	2	..	20670b	64	2992	11.2	-46 10	7.5	8.1	Ko	6	..	20858b
15	3407	11.0	-37 54	9.9	11.1	K	1	..	20670b	65	2803	11.2	-48 8	7.8	7.7	Fo	7	..	20858b
16	1165	11.0	-57 19	6.76	7.0	Ao	10	..	13007b	66	784	11.2	-61 13	7.4	9.2	K5	3	..	18486b
17	662	11.0	-66 56	9.8	9.8	A	1	..	15223b	67	607	11.2	-68 55	10.1	10.1	A	1	..	15223b
18	247	11.0	-78 45	9.8	10.8	Ko	3	..	20652b	68	605	11.2	-70 11	9.18	10.4	Ko	2	..	15168b
19	1021	11.1	+58 39	9.9	11.3	Mc	..	..	M	69	1613	11.3	+13 25	9.4	9.9	F8	3	..	4413m
20	1613	11.1	+49 0	8.8	9.8	Ko	1	..	37515i	70	1473	11.3	+10 0	9.2	9.2	Ao	4	..	15139b
21	1630	11.1	+41 4	5.75	5.83	A3	10	..	37501i	71	1592	11.3	+ 9 2	8.3	9.1	G5	3	..	15139b
22	1527	11.1	+31 53	6.68	6.63	B8	9	..	37447i	72	1620	11.3	+ 2 54	9.7	9.8	A2	2	..	39867b
23	1495	11.1	+29 12	10.7	10.8	A2	1	..	38172i	73	1872	11.3	-12 21	8.0	8.0	B9	6	..	20801b
24	1510	11.1	+26 33	7.40	8.40	Ko	4	..	38172i	74	1871	11.3	-12 52	7.72	8.50	G5	6	..	20801b
25	1591	11.1	+ 9 32	8.1	8.2	A3	7	..	15139b	75	1795	11.3	-14 19	8.5	8.6	A2	5	..	20801b
26	1591	11.1	+ 6 51	9.0	9.5	F8	2	..	15139b	76	1856	11.3	-16 38	9.1	10.1	Ko	1	..	15402b
27	1592	11.1	+ 6 23	8.1	8.9	G5	4	..	15139b	77	1750	11.3	-18 37	9.2	10.2	Ko	1	..	15402b
28	1643	11.1	+ 4 55	9.06	9.40	F2	4	2.3	15139b	78	1749	11.3	-18 42	8.6	8.7	A2	3	..	20767b
29	2021	11.1	- 7 0	9.2	9.5	Fo	2	..	44407b	79	1780	11.3	-19 57	7.86	7.9	B9	6	E	18301b
30	1840	11.1	- 7 17	9.5	9.5	Ao	2	..	44407b	80	5162	11.3	-23 32	9.2	8.5	Go	2	..	12666b
31	1945	11.1	- 9 10	10.4	10.4	Ao	2	..	24606b	81	4281	11.3	-25 46	8.5	7.8	B9	6	1.3	12666b
32	1947	11.1	-10 48	9.2	9.2	B9	4	..	24606b	82	4067	11.3	-28 12	7.8	8.4	Ko	6	5.5	18926b
33	1868	11.1	-13 1	10.6	10.6	Ao	2	..	24606b	83	3460	11.3	-36 11	8.6	8.8	B8	8	..	20670b
34	1869	11.1	-13 2	9.5	9.5	Ao	3	..	24606b	84	3411	11.3	-37 4	7.14	7.9	B8	5	..	7406b
35	4276	11.1	-25 31	9.5	9.2	A	1	..	12666b	85	3236	11.3	-44 30	10.9	9.3	A5	4	0.2	20671b
36	3447	11.1	-34 25	10.6	10.5	K2	1	..	20670b	86	2898	11.3	-47 56	9.8	9.0	Ao	2	..	20858b
37	3446	11.1	-35 5	8.65	8.8	B8	7	..	20670b	87	2698	11.3	-49 46	7.5	9.3	K5	4	..	24589b
38	3443	11.1	-35 38	9.2	9.1	Ao	6	..	20670b	88	2372	11.3	-51 9	9.4	9.9	Go	2	..	24589b
39	789	11.1	-63 1	6.10	6.9	Ao	10	..	18486b	89	2371	11.3	-51 40	9.1	9.9	Ko	2	..	24589b
40	719	11.1	-67 48	8.2	9.2	Ko	5	..	15223b	90	373	11.4	+73 14	8.8	9.9	K2	1	..	38187i
41	426	11.1	-75 53	8.0	9.1	K2	7	..	20652b	91	1672	11.4	+43 13	8.8	8.9	A2	3	..	37501i
42	1070	11.2	+59 54	8.46	9.81	Ma	3	..	37526i	92	1631	11.4	+41 36	9.0	9.4	F5	1	..	37501i
43	1071	11.2	+59 26	6.94	8.01	K2	7	..	37526i	93	1595	11.4	+36 33	9.4	10.2	G5	3	..	37447i
44	1507	11.2	+48 19	8.0	9.0	Ko	1	..	37515i	94	1517	11.4	+32 33	8.6	9.6	Ko	2	..	37447i
45	1429	11.2	+47 20	7.8	8.6	G5	3	..	37501i	95	1564	11.4	+20 56	8.1	8.9	G5	2	..	37472i
46	1726	11.2	+38 33	8.0	9.2	K5	2	..	37447i	96	1618	11.4	+14 20	9.4	9.5	A2	6	..	4413m
47	1533	11.2	+17 31	9.0	9.0	Ao	7	..	4413m	97	1474	11.4	+10 47	9.4	9.8	F5	2	..	15139b
48	1525	11.2	+15 37	8.7	8.7	Ao	6	2.2	4413m	98	1595	11.4	+ 9 33	8.3	9.1	G5	3	..	15139b
49	1622	11.2	+ 3 23	8.7	9.7	Ko	2	..	39867b	99	1718	11.4	+ 8 20	8.5	9.5	Ko	3	..	15139b
50	1621	11.2	+ 3 0	9.4	10.2	G5	1	..	39867b	100	1614	11.4	+ 5 52	8.7	9.3	Go	3	..	15139b

## THE HENRY DRAPER CATALOGUE.

56300

7<sup>h</sup> 11<sup>m</sup>.4

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1615	11.4	+ 5 33	9.0	9.3	Fo	2	..	37700i	51	1217	11.5	-54 44	8.9	9.5	G5	2	..	12757b
2	1623	11.4	+ 3 14	9.0	9.0	B8	5	..	37700i	52	248	11.5	-78 41	9.8	10.1	Fo	5	..	20652b
3	1623	11.4	+ 2 4	7.6	8.2	Go	5	..	37700i	53	1192	11.6	+52 8	8.0	8.5	F8	3	..	37515i
4	2024	11.4	- 6 24	9.1	9.1	Ao	4	..	44407b	54	1309	11.6	+51 41	7.7	8.2	F8	4	..	37515i
5	1844	11.4	- 7 42	7.9	8.7	G5	1	..	38609i	55	1501	11.6	+33 54	9.1	9.1	Ao	5	..	37447i
6	1947	11.4	- 9 5	8.3	8.3	B8	7	2,2	24606b	56	1474	11.6	+30 40	8.8	9.3	F8	3	3,2	37447i
7	1951	11.4	-10 42	9.2	10.2	Ko	2	..	24606b	57	1618	11.6	+13 46	8.8	9.9	K2	2	..	4413m
8	1864	11.4	-11 34	9.2	9.2	Ao	2	..	20801b	58	1526	11.6	+11 56	8.7	8.8	A3	3	..	15139b
9	1796	11.4	-14 5	9.5	9.5	Ao	2	..	24606b	59	1597	11.6	+ 9 39	7.06	7.12	A2	7	0,4	37891i
10	1732	11.4	-16 3	6.79	6.62	B3	..	5,4	56,83	60	1598	11.6	+ 8 57	9.0	10.2	K5	1	..	15139b
11	4070	11.4	-28 20	9.5	8.7	Ao	3	2,2	18926b	61	1757	11.6	+ 1 10	8.2	9.2	Ko	3	..	39867b
12	3452	11.4	-34 52	9.9	9.5	Fo	3	..	20670b	62	1626	11.6	- 1 54	9.4	9.5	A2	3	..	39867b
13	3453	11.4	-35 23	9.3	9.7	Fo	3	..	20670b	63	1882	11.6	- 4 51	7.9	8.9	Ko	3	..	38609i
14	3461	11.4	-36 49	9.2	8.8	A2	7	..	20670b	64	1953	11.6	-10 33	10.0	10.0	Ao	3	..	24606b
15	2905	11.4	-41 57	9.5	10.8	K	1	..	20671b	65	1865	11.6	-12 2	10.0	10.1	A3	3	..	24606b
16	3064	11.4	-42 3	8.4	7.8	B5	7	..	20671b	66	1908	11.6	-13 32	9.0	9.0	B9	4	..	20801b
17	2699	11.4	-49 51	10.2	9.4	Ao	4	..	24589b	67	1797	11.6	-14 19	6.84	6.90	A2	3	0,10	38671i
18	2644	11.4	-50 17	6.91	6.8	B9	4	..	8951b	68	1858	11.6	-16 7	9.2	9.2	Ao	2	..	15402b
19	798	11.4	-60 48	8.8	9.7	Ko	2	..	15176b	69	1857	11.6	-16 34	8.9	8.9	B9	4	..	15402b
20	790	11.4	-62 55	9.1	9.9	G5	2	..	15176b	70	1879	11.6	-17 34	9.2	9.2	B9	2	..	15402b
21	427	11.4	-75 9	8.38	9.0	Ko	7	..	20652b	71	1840	11.6	-21 7	8.1	8.5	G5	6	..	18301b
22	103	11.5	+86 35	8.2	8.8	Go	3	..	37546i	72	1841	11.6	-21 45	9.5	8.9	B9	2	..	20767b
23	447	11.5	+70 14	8.7	9.1	F5	3	0,2	38155i	73	4090	11.6	-26 41	9.0	8.7	B9	4	..	12666b
24	1022	11.5	+58 47	9.0	9.3	F	2	R	37526i	74	4186	11.6	-30 20	10.0	8.9	Ao	2	..	18926b
25	1692	11.5	+42 3	8.0	8.3	F2	4	..	37501i	75	4244	11.6	-31 46	9.2	8.9	K	2	..	42915b
26	1699	11.5	+37 12	9.5	9.5	A	2	R	37447i	76	3464	11.6	-36 2	7.26	7.5	B9	5	..	7406b
27	1588	11.5	+35 8	8.0	8.3	F2	7	..	37447i	77	3022	11.6	-40 29	8.9	10.2	K2	2	..	20671b
28	1473	11.5	+30 34	8.8	10.0	K5	1	..	37447i	78	3020	11.6	-41 0	7.9	7.8	B8	10	..	20671b
29	1619	11.5	+14 2	7.4	7.9	F8	4	3,8	36977i	79	3069	11.6	-42 39	10.0	10.2	G5	1	..	20671b
30	1617	11.5	+13 34	9.4	9.5	A2	3	..	4413m	80	2376	11.6	-51 19	9.4	9.7	G5	4	..	24589b
31	1663	11.5	+ 7 18	9.0	9.0	B9	4	..	15139b	81	800	11.6	-60 17	9.4	9.4	Ao	1	..	15176b
32	1625	11.5	+ 3 23	8.4	8.4	B9	6	..	37700i	82	607	11.6	-70 25	10.0	11.0	Ko	1	..	15168b
33	2025	11.5	- 6 46	8.7	8.7	B9	2	..	38609i	83	1201	11.7	+56 28	8.7	9.9	K5	1	..	37526i
34	1905	11.5	-13 45	7.9	7.9	Ao	6	..	20801b	84	1202	11.7	+55 57	9.2	9.7	F8	2	..	37526i
35	1906	11.5	-13 56	8.3	9.3	Ko	6	0,2	24606b	85	1185	11.7	+55 4	7.51	7.51	Ao	8	..	37526i
36	1878	11.5	-17 43	8.6	8.6	B9	4	..	15402b	86	1529	11.7	+31 9	5.98	5.96	B9	9	..	37447i
37	1753	11.5	-18 39	9.0	10.2	K5	1	..	15402b	87	1356	11.7	+28 41	8.7	9.1	F5	2	..	38172i
38	1754	11.5	-18 39	9.7	9.7	B9	1	..	15402b	88	1599	11.7	+24 44	8.4	8.4	Ao	2	..	38172i
39	1838	11.5	-21 27	8.7	8.2	B9	5	..	18301b	89	1566	11.7	+21 28	8.6	9.7	K2	2	..	37472i
40	1839	11.5	-21 46	9.7	8.9	A5	2	..	18301b	90	..	11.7	+14 32	..	..	F8	2	..	4413m
41	5173	11.5	-23 33	6.26	6.3	Ao	..	0,9	28,199	91	1527	11.7	+11 19	7.7	7.7	Ao	5	..	36977i
42	4184	11.5	-30 30	5.31	5.4	B5	..	0,9	56,123	92	1599	11.7	+ 9 46	9.0	9.0	Ao	4	..	15139b
43	4243	11.5	-31 45	9.7	8.6	B9	4	..	42915b	93	1616	11.7	+ 5 50	10.4	10.4	Ao	2	..	15139b
44	3453	11.5	-34 15	9.9	9.2	F5	5	..	20670b	94	1648	11.7	+ 4 47	8.80	9.14	F2	3	..	39867b
45	3463	11.5	-36 39	9.9	10.2	Fo	2	..	20670b	95	1649	11.7	+ 4 40	9.35	9.35	A	1	E	39867b
46	3412	11.5	-37 6	8.6	8.8	B9	7	..	20670b	96	1624	11.7	+ 2 56	8.7	8.7	Ao	4	..	37700i
47	3413	11.5	-37 42	8.6	9.4	F5	6	..	20670b	97	1759	11.7	+ 1 52	9.0	9.0	B9	3	..	37700i
48	2996	11.5	-46 57	9.2	9.0	Ao	4	..	20858b	98	1628	11.7	- 1 27	8.4	9.6	K5	3	..	39867b
49	1118	11.5	-52 51	9.7	10.5	G5	3	..	24589b	99	1948	11.7	- 9 20	10.2	10.2	Ao	3	..	24606b
50	1284	11.5	-53 29	6.82	7.3	Ao	6	..	8951b	100	1955	11.7	-10 28	10.0	10.0	Ao	2	..	24606b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

56400

7<sup>h</sup> 11<sup>m</sup>.7

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1954	11.7	-10 55	9.2	9.6	F5	4	..	24606b	51	2839	11.9	-27 17	8.0	8.3	G5	4	..	12666b
2	1866	11.7	-11 54	9.2	9.2	Ao	2	..	20801b	52	3462	11.9	-34 3	10.8	10.3	Ao	2	..	20670b
3	1799	11.7	-14 35	9.5	10.7	K5	1	..	24606b	53	3469	11.9	-36 23	7.5	9.1	K5	7	..	20670b
4	1798	11.7	-14 40	9.2	9.2	Ao	5	..	24606b	54	3421	11.9	-37 53	10.3	10.0	A3	3	..	20670b
5	1734	11.7	-15 24	5.39	5.45	A2	..	0.7	56,83	55	3000	11.9	-46 41	5.82	5.9	Aop	..	1,7 R	28,200
6	1882	11.7	-17 17	9.5	9.5	Ao	1	..	46170b	56	2807	11.9	-48 6	4.88	4.83	B8	..	0.4	28,200
7	1817	11.7	-20 11	9.3	9.4	Ao	1	..	15402b	57	1288	11.9	-53 23	11.0	11.0	A	1	..	24589b
8	3416	11.7	-37 23	10.8	10.7	G5	1	..	20670b	58	1170	11.9	-57 59	9.0	9.8	G	1	..	13007b
9	3271	11.7	-38 25	9.3	10.1	K2	3	..	20670b	59	797	11.9	-59 54	8.92	8.5	A5	2	..	18486b
10	2906	11.7	-41 15	6.10	6.3	B8	6	0.4	8969b	60	1026	12.0	+57 57	9.5	9.5	Ao	4	..	37526i
11	3070	11.7	-42 16	10.0	9.7	F5	3	..	20671b	61	1357	12.0	+28 49	8.7	8.8	A2	2	..	38172i
12	1286	11.7	-56 34	9.1	10.4	K2	1	0.1	13007b	62	1600	12.0	+24 15	8.6	9.0	F5	3	..	37472i
13	786	11.7	-61 27	8.6	9.2	Go	2	..	18486b	63	1477	12.0	+10 28	8.5	8.8	Fo	5	..	15139b
14	608	11.7	-68 40	9.7	9.8	A2	3	..	15223b	64	1632	12.0	-1 25	8.1	8.2	A3	7	..	39867b
15	249	11.7	-78 23	9.5	10.3	G5	5	..	20652b	65	1868	12.0	-11 17	10.6	10.6	A	1	..	24606b
16	1615	11.8	+49 50	8.37	8.45	A3	2	..	37515i	66	1803	12.0	-14 42	9.1	9.2	A2	5	..	24606b
17	1354	11.8	+27 19	7.75	8.75	Ko	3	..	38172i	67	1805	12.0	-14 55	9.16	9.72	Go	3	0.1	24606b
18	1512	11.8	+26 31	7.6	8.6	Ko	3	..	38172i	68	1736	12.0	-15 48	9.3	9.4	A2	2	..	15402b
19	1621	11.8	+14 50	10.0	10.8	G5	2	..	4413m	69	1819	12.0	-20 14	9.28	8.9	F8	2	..	15402b
20	1620	11.8	+13 41	8.7	9.5	G5	4	..	4413m	70	1844	12.0	-21 15	9.1	9.2	K2	3	3.1	18301b
21	1667	11.8	+7 24	10.4	10.4	Ao	2	..	15139b	71	1845	12.0	-21 58	9.2	9.1	Ao	2	..	20767b
22	1629	11.8	-1 21	10.4	10.4	Ao	2	..	39867b	72	4102	12.0	-26 39	7.9	7.7	B9	3	..	42935b
23	1824	11.8	-3 31	8.1	8.5	F5	4	..	38609i	73	3466	12.0	-34 9	11.3	10.6	A	1	..	20670b
24	2048	11.8	-6 0	9.1	9.2	A2	2	..	44407b	74	3464	12.0	-35 32	8.6	8.5	B9	7	..	20670b
25	1951	11.8	-9 33	9.7	9.8	A2	4	..	24606b	75	3463	12.0	-35 45	9.3	9.7	A5	5	..	20670b
26	1950	11.8	-9 54	9.7	9.7	Ao	2	..	24606b	76	3423	12.0	-37 36	9.7	10.5	K5	2	..	20670b
27	1956	11.8	-10 35	10.2	10.2	Ao	2	..	24606b	77	1221	12.0	-54 38	8.0	9.0	Ko	3	..	12757b
28	1874	11.8	-12 33	9.7	10.0	F2	1	..	24606b	78	705	12.0	-69 57	7.02	8.3	Ko	9	..	15168b
29	1860	11.8	-16 33	7.9	7.9	Ao	2	..	8903b	79	544	12.0	-71 37	10.1	11.1	Ko	1	..	15168b
30	1884	11.8	-17 7	7.9	7.9	B8	3	..	8903b	80	576	12.0	-72 11	8.5	8.6	A3	6	E	20652b
31	3826	11.8	-32 55	8.6	8.6	F8	4	..	42915b	81	1074	12.1	+59 32	9.0	9.4	F5	2	..	37526i
32	3631	11.8	-33 44	11.3	10.2	Ao	2	..	20670b	82	1731	12.1	+38 52	7.02	8.02	Ko	6	0.6	37447i
33	3417	11.8	-37 3	10.6	10.3	A5	2	..	20670b	83	1531	12.1	+31 2	8.6	8.6	Ao	6	..	37447i
34	3419	11.8	-37 17	10.1	10.3	G5	3	..	20670b	84	1675	12.1	+19 44	8.3	8.6	Fo	3	R	38238i
35	3418	11.8	-37 51	9.2	9.2	Ao	8	..	20670b	85	1601	12.1	+9 24	8.3	8.3	B8	6	..	15139b
36	3187	11.8	-39 41	8.9	10.2	Ma	2	..	20671b	86	1720	12.1	+8 49	9.0	9.8	G5	1	..	15139b
37	3056	11.8	-43 33	9.1	8.4	Ao	3	..	20858b	87	1669	12.1	+7 40	8.8	8.9	A3	3	..	15139b
38	2999	11.8	-46 58	8.5	8.7	G5	3	..	20858b	88	1595	12.1	+6 35	10.0	10.1	A2	2	..	15139b
39	1287	11.8	-53 20	9.9	9.9	Ao	3	..	24589b	89	1596	12.1	+5 59	9.2	9.8	Go	1	..	15139b
40	682	11.8	-64 30	8.9	9.9	Ko	2	..	15223b	90	..	12.1	-1 22	..	..	Ao	1	..	39867b
41	1024	11.9	+58 3	9.9	9.9	Ao	2	..	37526i	91	1885	12.1	-4 13	8.5	9.3	G5	2	..	38609i
42	1130	11.9	+54 13	8.9	8.9	B8	3	E	37526i	92	2050	12.1	-6 4	7.8	7.9	A2	3	..	38609i
43	1574	11.9	+34 45	9.0	9.1	A5	3	..	37447i	93	2029	12.1	-6 52	8.6	8.6	Ao	1	..	38609i
44	1623	11.9	+13 34	9.0	9.5	F8	4	..	4413m	94	2030	12.1	-7 1	8.7	8.7	B9	4	..	44407b
45	1530	11.9	+11 46	8.5	8.5	Ao	3	..	15139b	95	1851	12.1	-7 21	7.4	7.5	A3p	4	1,5 R	38609i
46	1594	11.9	+6 51	6.44	6.42	B9	8	..	37700i	96	1953	12.1	-9 34	8.3	9.5	K5	3	..	20801b
47	1626	11.9	+2 33	8.5	9.5	Ko	2	..	37700i	97	1958	12.1	-10 46	9.7	10.5	G5	1	..	24606b
48	1881	11.9	+0 44	8.3	9.3	Ko	4	..	37700i	98	..	12.1	-11 14	..	..	Ao	2	..	24606b
49	1952	11.9	-9 44	9.5	9.5	Ao	3	..	24606b	99	1869	12.1	-11 50	10.6	10.6	Ao	1	..	24606b
50	1867	11.9	-11 19	8.5	9.5	Ko	3	..	20801b	100	1877	12.1	-12 41	9.3	9.7	F5	4	..	24606b

## THE HENRY DRAPER CATALOGUE.

56500

7<sup>h</sup> 12<sup>m</sup>.1

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1913	12.1	-13 17	7.47	7.42	B8	8	..	20801b	51	1865	12.3	-16 48	10.4	10.4	A0	1	..	15402b
2	1758	12.1	-19 3	9.0	9.3	F0	2	..	20767b	52	1788	12.3	-19 32	9.1	9.1	A2	1	..	15402b
3	1786	12.1	-19 18	9.5	8.9	A	1	..	20767b	53	4144	12.3	-29 58	8.32	8.6	K5	2	..	18926b
4	4141	12.1	-29 19	9.7	8.8	B9	5	..	18926b	54	4205	12.3	-30 16	7.06	7.5	B5	6	..	8905b
5	3425	12.1	-37 57	9.9	9.7	F0	4	..	20670b	55	4262	12.3	-31 35	10.2	9.7	A	2	..	42915b
6	3275	12.1	-39 1	9.9	9.9	A5	3	..	20671b	56	3832	12.3	-32 10	9.3	8.9	A3	4	..	42915b
7	2911	12.1	-41 26	9.7	9.6	F8	4	..	20671b	57	3466	12.3	-35 38	8.6	8.5	B9	7	..	20670b
8	2380	12.1	-51 27	10.2	9.9	F5	3	..	24589b	58	3276	12.3	-38 38	9.3	9.6	A5	3	..	20671b
9	802	12.1	-60 36	8.6	9.1	F8	2	..	15176b	59	704	12.3	-63 3	9.0	10.1	K2	1	..	15176b
10	298	12.1	-77 45	9.6	10.6	K0	3	..	20652b	60	720	12.3	-67 37	7.8	8.4	G0	7	..	15223b
11	920	12.2	+62 44	8.9	9.9	K0	3	..	37526i	61	610	12.3	-70 37	10.0	10.4	F5	2	..	15168b
12	921	12.2	+62 18	8.9	8.9	A0	4	..	37526i	62	545	12.3	-71 55	10.1	11.1	K	1	..	15168b
13	1356	12.2	+27 28	8.1	8.9	G5	3	..	38172i	63	1593	12.4	+35 21	7.17	8.17	K0	7	..	37447i
14	1622	12.2	+13 57	8.5	8.6	A2	5	2,2	4413m	64	1520	12.4	+32 32	9.8	9.9	A2	1	..	37447i
15	1603	12.2	+9 28	6.99	7.55	G0	7	0,4 R	37891i	65	1667	12.4	+23 39	9.5	9.5	A0	2	..	38238i
16	1722	12.2	+8 19	8.5	9.7	K5	1	..	15139b	66	1724	12.4	+8 22	10.4	10.7	F0	1	..	15139b
17	1721	12.2	+8 0	9.7	9.8	A2	2	..	15139b	67	..	12.4	+1 17	var.	var.	Md	..	R	56,200
18	1883	12.2	+0 49	7.89	8.67	G5	4	..	37700i	68	2028	12.4	-2 30	8.9	9.0	A2	3	E	39867b
19	1668	12.2	-0 38	9.7	9.7	A0	3	..	39867b	69	1854	12.4	-7 59	9.5	9.5	A0	1	..	44407b
20	1886	12.2	-4 37	8.7	8.8	A5	2	..	38609i	70	1855	12.4	-8 5	8.9	9.7	G5	3	..	44407b
21	2051	12.2	-5 44	8.7	9.0	F0	4	..	44407b	71	1955	12.4	-9 15	9.7	9.7	A0	2	..	24606b
22	2031	12.2	-6 41	8.7	9.0	A0	1	..	38609i	72	1964	12.4	-10 9	9.2	10.0	G5	2	..	24606b
23	1828	12.2	-8 34	8.3	9.3	K0	4	..	44407b	73	1873	12.4	-11 25	10.2	10.2	A0	2	..	24606b
24	1871	12.2	-12 2	10.0	10.0	A0	2	..	24606b	74	1882	12.4	-12 26	9.1	9.1	B9	2	..	20801b
25	1914	12.2	-13 31	7.07	7.07	A0	10	..	20801b	75	1916	12.4	-13 56	7.9	8.9	K0	7	..	24606b
26	1806	12.2	-14 20	10.4	10.5	A2	3	..	24606b	76	1785	12.4	-22 39	8.3	9.2	K2	1	..	18301b
27	1863	12.2	-16 37	9.2	9.3	A5	3	..	15402b	77	5189	12.4	-23 8	4.82	7.0	K5	..	..	28,200
28	1760	12.2	-18 17	9.3	9.3	B8	3	..	15402b	78	5192	12.4	-23 8	7.0	6.9	F0	..	0,7	28,200
29	1783	12.2	-22 6	9.2	9.1	F8	3	..	20767b	79	5190	12.4	-23 39	7.21	7.3	B5	5	..	42935b
30	3471	12.2	-34 35	10.8	10.3	G5	1	..	20670b	80	3850	12.4	-27 35	9.2	8.4	B9	3	..	12666b
31	2915	12.2	-41 55	6.9	7.3	A0	3	..	42161b	81	4149	12.4	-29 11	9.2	8.5	B9	3	..	18926b
32	2382	12.2	-52 2	9.8	9.3	B9	7	..	24589b	82	4265	12.4	-31 5	11.4	8.5	B9	5	..	42915b
33	703	12.2	-63 12	9.2	10.4	K5	1	..	15176b	83	3474	12.4	-34 9	9.2	8.9	A0	7	..	20670b
34	105	12.2	-87 36	9.2	10.0	G5	3	..	15145b	84	3473	12.4	-34 34	9.2	9.4	F2	5	..	20670b
35	1058	12.3	+57 4	8.6	9.1	F8	2	..	37526i	85	2919	12.4	-41 59	7.3	9.0	K0	5	..	20671b
36	1678	12.3	+19 46	9.20	9.20	A	1	..	38238i	86	1432	12.5	+47 10	7.6	8.4	G5	2	..	37501i
37	1443	12.3	+16 43	3.65	3.71	A2	..	0, R	2532c	87	1503	12.5	+29 17	9.0	9.3	F2	2	..	38172i
38	1442	12.3	+15 55	8.2	8.2	A0	3	..	38971i	88	1725	12.5	+8 37	10.0	10.0	A0	3	..	15139b
39	1605	12.3	+8 58	8.3	9.5	K5	3	..	15139b	89	1726	12.5	+8 18	9.0	10.0	K0	2	..	15139b
40	1723	12.3	+7 58	8.3	8.3	B9	7	..	15139b	90	1885	12.5	+0 22	8.1	8.1	A0	6	..	37700i
41	1635	12.3	-1 37	8.5	9.5	K0	4	..	39867b	91	1887	12.5	+0 6	8.1	8.2	A2	3	..	37700i
42	1826	12.3	-3 43	8.7	8.8	A3	3	..	38609i	92	..	12.5	-11 30	..	..	A0	1	..	24606b
43	1963	12.3	-10 5	8.91	9.91	K0	3	..	24606b	93	1874	12.5	-11 51	6.70	7.12	F5	8	..	20801b
44	1962	12.3	-10 25	10.0	10.0	A0	2	..	24606b	94	1883	12.5	-12 41	8.5	9.5	K	2	..	20801b
45	1961	12.3	-10 55	9.7	9.7	A0	3	..	24606b	95	1884	12.5	-12 43	9.5	9.5	A0	2	..	20801b
46	1872	12.3	-11 33	9.2	10.2	K0	3	..	24606b	96	1918	12.5	-13 46	9.2	9.2	B8	4	..	24606b
47	1880	12.3	-12 33	9.5	9.6	A2	2	..	20801b	97	1919	12.5	-13 49	7.7	7.7	B8	8	..	24606b
48	1881	12.3	-12 38	9.5	10.7	K5	2	..	24606b	98	1739	12.5	-15 23	10.2	10.2	A0	2	..	15402b
49	1807	12.3	-14 6	10.2	11.2	K0	2	..	24606b	99	1870	12.5	-16 18	9.0	10.1	K2	1	..	15402b
50	..	12.3	-14 38	..	..	K5	1	..	24606b	100	1869	12.5	-16 26	9.7	9.7	B8	2	..	15402b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

56600

7<sup>h</sup> 12<sup>m</sup>.5

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1891	12.5	-17 8	9.7	9.7	B9	2	..	15402b	51	1731	12.8	+ 8 37	9.7	9.7	A0	1	..	15139b
2	3640	12.5	-33 27	10.3	9.4	F5	4	..	20670b	52	1644	12.8	- 1 49	8.5	8.8	F0	4	..	39867b
3	2654	12.5	-50 18	9.4	9.0	A0	7	..	24589b	53	1966	12.8	-10 19	10.0	10.0	A0	2	..	24606b
4	705	12.5	-63 47	9.9	9.9	A	1	..	15176b	54	1886	12.8	-12 37	9.3	9.3	B8	2	..	20801b
5	1250	12.6	+46 5	8.0	8.1	A3	5	..	37501i	55	1894	12.8	-17 11	8.5	8.6	A2	5	..	15402b
6	1421	12.6	+45 21	8.0	9.0	K0	2	..	37501i	56	3858	12.8	-27 39	9.2	8.3	A0	3	..	12666b
7	1636	12.6	+25 45	8.7	8.8	A2	3	..	38172i	57	4220	12.8	-30 32	9.0	8.8	A0	4	..	18926b
8	1632	12.6	+ 3 41	9.0	9.1	A2	3	..	37700i	58	3480	12.8	-36 34	8.9	9.4	A5	7	..	20670b
9	1888	12.6	+ 0 19	9.0	10.0	K0	1	..	39867b	59	3284	12.8	-38 41	8.7	8.8	A0	6	..	20671b
10	1831	12.6	- 3 35	7.8	7.8	B9	7	..	38609i	60	2926	12.8	-41 32	10.8	9.9	F5	2	..	20671b
11	1888	12.6	- 5 0	9.05	9.03	B9	4	..	44407b	61	3090	12.8	-42 34	9.1	10.1	K0	1	..	20671b
12	2054	12.6	- 5 17	10.0	10.1	A3	2	..	44407b	62	2814	12.8	-48 4	8.0	8.0	G0	7	..	20858b
13	2055	12.6	- 5 39	7.03	7.01	B9	6	..	38609i	63	1295	12.8	-53 16	9.7	9.8	A2	5	..	24589b
14	2032	12.6	- 6 30	6.36	7.43	K2	4	..	38609i	64	959	12.9	+61 8	8.6	8.9	F0	5	..	37526i
15	1830	12.6	- 8 53	9.1	10.1	K0	1	..	44407b	65	1543	12.9	+11 41	8.7	9.2	F8	2	..	15139b
16	1959	12.6	- 9 40	10.1	10.2	A2	2	..	24606b	66	1484	12.9	+10 20	9.7	9.7	A0	2	..	15139b
17	1810	12.6	-14 40	8.1	8.5	F5	8	..	20801b	67	1600	12.9	+ 6 28	8.3	8.3	B9	4	..	15139b
18	3852	12.6	-27 42	4.77	6.7	Mb	..	5.9	28,200	68	1890	12.9	+ 0 20	10.4	10.4	B9	2	..	39867b
19	3853	12.6	-28 2	10.0	9.0	A	1	..	12666b	69	1672	12.9	- 0 41	9.0	9.0	A0	5	..	39867b
20	4156	12.6	-29 46	8.7	9.2	K5	1	..	18926b	70	1960	12.9	- 9 15	9.5	9.3	B	2	R	24606b
21	4270	12.6	-31 52	7.10	8.2	K5	7	..	42915b	71	1962	12.9	- 9 21	10.0	10.0	A0	3	..	24606b
22	3475	12.6	-34 6	11.3	10.2	F2	2	..	20670b	72	1967	12.9	-10 21	9.7	10.5	G5	1	..	24606b
23	3470	12.6	-35 11	10.3	10.5	G5	1	..	20670b	73	..	12.9	-11 43	..	..	B8	2	..	24606b
24	3469	12.6	-35 59	9.5	9.2	A0	6	..	20670b	74	1877	12.9	-11 57	10.0	10.6	G0	2	..	24606b
25	2708	12.6	-49 32	9.0	9.0	F0	6	..	24589b	75	1876	12.9	-11 59	10.4	10.9	F8	2	..	24606b
26	1292	12.6	-53 17	8.8	8.9	A0	7	..	24589b	76	1920	12.9	-13 45	8.9	10.3	Mb	3	..	24606b
27	1513	12.7	+48 31	9.0	9.3	F0	2	..	37515i	77	1766	12.9	-18 5	8.5	9.6	K2	2	..	15402b
28	1597	12.7	+36 51	7.8	8.6	G5	6	..	37447i	78	4226	12.9	-30 8	8.15	8.3	G5	5	..	18926b
29	1505	12.7	+29 21	8.0	9.0	K0	5	..	38172i	79	3476	12.9	-35 44	9.9	9.7	B9	5	..	20670b
30	1538	12.7	+11 36	8.3	9.1	G5	2	..	15139b	80	3481	12.9	-36 47	9.3	9.4	F5	6	..	20670b
31	1728	12.7	+ 8 43	9.7	9.7	A	1	..	15139b	81	3285	12.9	-38 7	10.3	10.1	K0	2	..	20670b
32	1641	12.7	- 1 22	8.5	8.5	B9	6	..	39867b	82	1225	12.9	-54 45	9.2	9.5	F0	3	..	24589b
33	1793	12.7	-19 43	8.9	9.1	K0	2	0.2-	18301b	83	1598	13.0	+36 15	9.8	9.8	A0	2	..	37447i
34	1830	12.7	-21 1	7.16	8.5	K0	3	..	42935b	84	1360	13.0	+27 11	8.6	8.9	F0	3	..	38172i
35	1786	12.7	-22 55	9.7	8.9	A0	2	..	18301b	85	1486	13.0	+10 52	8.4	8.5	A2	6	..	15139b
36	5115	12.7	-24 31	9.5	9.2	G5	1	..	12666b	86	1732	13.0	+ 8 54	9.4	9.8	F5	2	..	15139b
37	5117	12.7	-24 59	7.20	7.0	A5	5	3.8	42935b	87	1653	13.0	+ 4 32	8.8	8.8	B9	3	..	37700i
38	4275	12.7	-31 6	9.3	8.5	A0	6	..	42915b	88	1768	13.0	+ 1 43	9.0	9.6	G0	2	..	37700i
39	3478	12.7	-36 17	9.5	9.5	A2	6	..	20670b	89	1767	13.0	+ 1 26	9.2	10.4	K5	1	..	39867b
40	3035	12.7	-40 52	8.7	9.6	G0	3	..	20671b	90	2038	13.0	- 2 23	9.2	9.2	B9	3	E	39867b
41	2923	12.7	-41 58	7.4	7.5	B8	9	..	20671b	91	1878	13.0	-11 27	10.1	10.9	G5	1	..	24606b
42	3088	12.7	-43 0	9.1	9.6	F5	4	..	20671b	92	1876	13.0	-16 59	9.3	9.3	A0	2	..	15402b
43	3049	12.7	-45 49	10.2	9.7	A2	3	..	20671b	93	1788	13.0	-22 29	9.7	9.1	A0	2	..	18301b
44	686	12.7	-64 42	7.6	7.6	B8	8	..	15223b	94	5125	13.0	-24 11	8.5	8.0	B5	4	..	42935b
45	1194	12.8	+52 0	8.8	8.9	A5	1	..	37515i	95	3843	13.0	-32 44	9.9	9.4	K2	2	..	20670b
46	1702	12.8	+37 39	9.0	9.1	A5	3	..	37447i	96	3435	13.0	-37 13	10.6	11.1	K0	1	..	20670b
47	1576	12.8	+34 44	7.31	8.40	K5	7	..	37447i	97	3286	13.0	-38 29	9.3	9.1	F0	4	..	20671b
48	1504	12.8	+32 56	9.5	10.5	K0	1	..	37447i	98	3039	13.0	-40 45	8.6	9.0	F5	4	..	20671b
49	1517	12.8	+26 7	8.0	8.3	F0	4	..	38172i	99	2931	13.0	-41 39	9.9	9.6	F5	3	..	20671b
50	1611	12.8	+24 17	8.4	8.4	A0	2	..	38238i	100	3092	13.0	-42 11	9.0	9.6	K0	3	..	20671b

## THE HENRY DRAPER CATALOGUE.

56700

7<sup>h</sup> 13<sup>m</sup>.0

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	3051	13.0	-45 43	8.0	7.7	A5	7	..	20858b	51	4113	13.2	-28 26	6.94	7.1	Ao	7	0,4	8905b
2	3013	13.0	-46 25	9.8	9.3	Fo	1	..	20858b	52	3847	13.2	-32 52	7.9	7.3	B9	5	1,3	42915b
3	2660	13.0	-50 20	7.54	8.8	Ko	7	..	24589b	53	3484	13.2	-34 13	10.6	10.2	G5	2	..	20670b
4	2392	13.0	-51 43	9.4	10.2	G5	2	..	24589b	54	3202	13.2	-39 26	9.3	9.3	A2	4	..	20671b
5	1123	13.0	-52 20	5.99	7.3	G5	..	5,3	56,123	55	2395	13.2	-51 45	10.5	9.9	Ao	4	..	24589b
6	883	13.0	-58 59	8.6	9.5	Ko	2	..	13007b	56	437	13.2	-77 1	9.9	10.5	Go	2	..	20652b
7	796	13.0	-62 52	8.6	8.7	A3	6	..	18486b	57	475	13.3	+68 49	9.2	9.8	Go	2	..	38155i
8	577	13.0	-72 35	8.1	9.1	Ko	5	E	20652b	58	960	13.3	+61 3	9.2	9.6	F5	1	..	37526i
9	1046	13.1	+60 31	8.0	8.4	F5	8	..	37526i	59	1133	13.3	+54 42	9.2	9.6	F5	1	..	37526i
10	1047	13.1	+60 11	9.0	9.6	Go	2	..	37526i	60	1837	13.3	+40 5	8.2	9.4	K5	2	..	37501i
11	1195	13.1	+52 27	8.2	9.3	K2	2	..	37515i	61	1362	13.3	+27 0	6.88	7.88	Ko	5	..	38172i
12	1599	13.1	+36 30	8.6	9.2	Go	3	..	37447i	62	1572	13.3	+21 8	8.8	9.6	G5	2	..	37472i
13	1569	13.1	+18 45	8.7	8.8	A5	2	..	37472i	63	1675	13.3	+7 0	9.7	9.7	Ao	2	..	15139b
14	1628	13.1	+14 32	7.7	7.7	B9	6	0,5	37891i	64	1654	13.3	+4 14	7.9	7.9	Ao	5	..	37700i
15	1626	13.1	+13 42	7.4	8.5	K2	3	2,3	37891i	65	1838	13.3	-3 26	8.9	9.0	A5	3	..	44407b
16	1544	13.1	+11 15	7.5	8.5	Ko	4	..	15139b	66	1892	13.3	-4 53	10.0	10.0	Ao	1	..	44407b
17	1609	13.1	+9 1	8.8	8.9	A5	4	..	15139b	67	1891	13.3	-5 1	9.5	9.5	B9	3	..	44407b
18	1891	13.1	+0 0	7.88	7.88	Ao	4	..	37700i	68	2061	13.3	-5 34	9.1	9.7	Go	2	..	44407b
19	2039	13.1	-2 56	7.9	7.9	Ao	5	..	38609i	69	1964	13.3	-9 21	8.3	8.8	F8	4	..	20801b
20	1836	13.1	-3 42	9.1	9.2	A2	3	..	44407b	70	1970	13.3	-11 2	10.0	10.0	Ao	2	..	24606b
21	2059	13.1	-5 8	9.5	9.6	A2	2	..	44407b	71	1922	13.3	-13 25	10.2	10.3	A3	1	..	24606b
22	..	13.1	-11 14	..	..	A3	2	..	24606b	72	1923	13.3	-13 32	9.1	9.2	A3	5	..	24606b
23	1879	13.1	-11 47	9.0	9.3	Fo	3	..	20801b	73	1818	13.3	-14 9	9.2	9.2	B8	6	..	24606b
24	1814	13.1	-14 8	9.1	9.5	F5	4	..	24606b	74	1817	13.3	-14 40	9.3	10.5	K5	2	..	24606b
25	1813	13.1	-14 25	9.2	10.2	Ko	2	..	24606b	75	1790	13.3	-22 32	8.5	8.0	Ao	5	..	18301b
26	1898	13.1	-18 2	9.0	9.0	B9	4	..	15402b	76	1793	13.3	-22 39	8.7	8.6	B9	4	..	18301b
27	1767	13.1	-18 33	8.9	8.8	B5	4	..	15402b	77	4114	13.3	-28 53	7.8	8.3	K2	4	0,2	18926b
28	1833	13.1	-21 1	8.3	8.6	Ko	4	..	18301b	78	4237	13.3	-30 14	8.3	8.8	G5	2	..	18926b
29	1789	13.1	-22 54	8.9	9.1	G5	2	..	18301b	79	3485	13.3	-36 25	5.01	4.84	B3	..	..	28,200
30	4167	13.1	-29 33	7.7	7.9	A3	4	..	8905b	80	3440	13.3	-37 13	9.0	10.0	Ko	4	..	20670b
31	4234	13.1	-30 43	6.23	7.3	A5	7	0,7 R	8905b	81	3269	13.3	-45 0	9.00	9.3	Fo	2	..	20858b
32	3844	13.1	-32 19	10.8	9.7	Ao	1	..	20670b	82	3056	13.3	-45 47	10.5	9.7	Ao	2	..	20671b
33	3288	13.1	-38 9	5.76	6.3	B3	..	2,4-	56,123	83	2718	13.3	-49 51	9.8	9.3	F5	5	..	24589b
34	3018	13.1	-46 26	9.1	8.5	A3	4	..	20858b	84	2396	13.3	-51 22	10.0	10.8	G	1	..	24589b
35	3019	13.1	-46 42	9.6	9.3	Fo	3	..	20858b	85	801	13.3	-59 6	8.9	9.5	Go	2	..	13007b
36	1124	13.1	-52 38	9.3	10.5	K5	2	..	24589b	86	435	13.3	-74 0	9.6	9.7	A5	4	..	20652b
37	803	13.1	-60 54	7.1	7.7	F2	7	..	18486b	87	321	13.4	+74 15	9.5	9.6	A2	2	..	38187i
38	485	13.2	+67 26	7.9	8.5	Go	5	..	37713i	88	705	13.4	+63 4	7.9	9.0	K2	6	..	37526i
39	1734	13.2	+8 5	8.7	9.1	F5	3	..	15139b	89	1506	13.4	+33 47	7.04	7.10	A2	9	..	37447i
40	1606	13.2	+6 1	9.7	9.8	A2	3	..	15139b	90	1642	13.4	+22 12	8.0	8.8	G5	2	..	37472i
41	1634	13.2	+3 21	9.0	9.8	G5	1	..	39867b	91	1494	13.4	+12 30	8.4	8.5	A2	2	E	15139b
42	1969	13.2	-10 16	9.3	9.6	Fo	3	..	24606b	92	1495	13.4	+12 1	7.9	8.2	Fo	4	..	15139b
43	1968	13.2	-11 2	9.7	9.7	Ao	2	..	24606b	93	1735	13.4	+8 40	7.4	8.4	Ko	7	..	15139b
44	1880	13.2	-11 28	10.0	10.0	B9	2	..	24606b	94	1656	13.4	+4 7	8.1	8.1	Ao	4	..	37700i
45	1815	13.2	-14 5	9.1	10.3	K5	3	..	24606b	95	1634	13.4	+2 4	9.0	9.0	Ao	2	..	37700i
46	1816	13.2	-14 51	9.1	9.9	G5	4	0,1	24606b	96	1893	13.4	-4 8	8.7	9.2	F8	2	..	38609i
47	1768	13.2	-18 37	8.0	9.1	K2	3	..	15402b	97	2035	13.4	-6 58	9.2	9.2	Ao	2	..	44407b
48	1832	13.2	-20 17	8.7	8.5	Ao	4	..	18301b	98	1966	13.4	-9 22	9.5	10.0	F8	2	..	24606b
49	1854	13.2	-21 16	9.0	9.1	Ma	2	..	18301b	99	1965	13.4	-10 3	9.16	10.16	Ko	3	..	24606b
50	4312	13.2	-25 36	8.0	9.2	K2	1	..	12666b	100	1971	13.4	-10 29	8.5	8.5	B9	5	..	20801b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

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7<sup>h</sup> 13<sup>m</sup>.4

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1972	13.4	-11 4	9.7	9.7	Ao	4	..	24606b	51	3495	13.6	-34 51	9.3	10.3	Ko	2	..	20670b
2	..	13.4	-12 19	..	..	B8	3	..	24606b	52	3494	13.6	-34 57	10.3	10.6	Ko	1	..	20670b
3	1924	13.4	-13 43	7.5	7.8	F2	8	..	24606b	53	3485	13.6	-35 6	9.60	9.2	Ao	5	..	20670b
4	1819	13.4	-14 35	9.5	9.5	Ao	3	..	24606b	54	3488	13.6	-36 40	8.9	8.5	B9	8	..	20670b
5	1901	13.4	-17 14	9.3	9.3	B9	2	..	15402b	55	3489	13.6	-36 55	2.74	6.0	K5	..	R	28,200
6	1769	13.4	-18 39	9.3	9.1	B	2	..	15402b	56	3487	13.6	-36 56	9.3	7.9	B9	5	..	20670b
7	1855	13.4	-21 31	8.7	8.8	F5	4	..	18301b	57	3031	13.6	-46 4	8.4	8.2	Ao	7	..	20858b
8	5139	13.4	-24 38	9.0	8.1	B8	3	0,2	12666b	58	2823	13.6	-48 9	8.6	8.8	F2	4	..	20858b
9	4119	13.4	-28 57	6.98	7.1	B9	7	..	8905b	59	2400	13.6	-51 50	10.0	9.9	F8	3	..	24589b
10	3442	13.4	-37 51	10.6	10.3	A	2	..	20670b	60	1301	13.6	-53 26	8.6	8.5	Ao	9	..	24589b
11	3443	13.4	-37 56	9.3	9.5	A3	5	..	20670b	61	214	13.6	-81 20	8.8	8.8	Ao	5	..	20557b
12	2932	13.4	-41 59	8.6	9.1	Ko	4	..	20671b	62	152	13.7	+84 24	7.81	8.81	Ko	3	..	37546i
13	3023	13.4	-46 36	5.54	7.5	K5	..	0,2-	28,200	63	300	13.7	+75 47	7.22	7.22	Ao	7	..	37559i
14	2398	13.4	-51 57	10.0	10.5	Ko	2	..	24589b	64	476	13.7	+68 7	8.5	8.9	F5	4	0,4	37713i
15	1299	13.4	-53 17	9.5	10.0	F8	4	..	24589b	65	1204	13.7	+56 29	8.8	9.8	Ko	2	..	37526i
16	1201	13.4	-55 32	8.6	9.7	K2	3	..	24589b	66	1196	13.7	+52 25	8.7	9.0	F2	2	..	37515i
17	212	13.4	-81 1	8.8	9.2	F5	3	..	20557b	67	1838	13.7	+40 51	9.0	9.0	Ao	2	..	37501i
18	449	13.5	+70 53	7.92	7.92	Ao	5	2,7	37713i	68	1447	13.7	+16 17	9.0	9.0	A	1	E	37472i
19	450	13.5	+70 9	8.2	8.5	Fo	3	5,2	38155i	69	1609	13.7	+ 6 47	8.7	9.3	Go	1	..	15139b
20	1048	13.5	+60 5	6.28	6.42	A5	10	..	37526i	70	1658	13.7	+ 3 57	8.7	8.7	B9	4	..	37700i
21	1892	13.5	+ 0 27	7.7	7.8	A5	8	..	37700i	71	1870	13.7	- 7 39	9.0	9.0	B9	5	..	44407b
22	1894	13.5	+ 0 13	9.4	9.4	Ao	2	..	39867b	72	1968	13.7	- 9 52	9.1	10.1	Ko	4	..	24606b
23	1674	13.5	- 0 29	10.0	10.1	A2	3	..	39867b	73	1975	13.7	-10 25	10.2	10.2	B9	2	..	24606b
24	1832	13.5	- 8 13	9.0	10.0	Ko	3	..	44407b	74	1856	13.7	-21 11	8.1	8.6	Ko	5	..	18301b
25	1974	13.5	-10 48	8.9	9.9	Ko	3	..	24606b	75	4322	13.7	-25 48	7.9	8.3	Fo	4	..	12666b
26	1881	13.5	-11 13	8.5	8.8	Fo	5	..	20801b	76	4140	13.7	-26 37	6.34	6.2	B5	..	2,8	28,200
27	1883	13.5	-11 47	10.0	9.8	B3	3	..	24606b	77	3667	13.7	-34 0	10.3	10.3	Ko	2	..	20670b
28	1882	13.5	-12 1	9.7	9.7	Ao	5	0,2	24606b	78	3496	13.7	-34 14	10.6	9.7	A2	4	..	20670b
29	1889	13.5	-12 37	9.5	10.7	K5	2	..	24606b	79	3486	13.7	-35 11	10.8	10.3	Fo	2	..	20670b
30	1926	13.5	-13 31	8.3	8.3	A	6	..	24606b	80	3490	13.7	-36 7	10.1	10.0	Fo	3	..	20670b
31	1925	13.5	-13 32	8.3	8.3	A	..	..	24606b	81	3445	13.7	-37 21	11.3	11.1	Go	1	..	20670b
32	1746	13.5	-15 14	8.90	8.88	B9	3	..	15402b	82	3035	13.7	-46 11	9.1	8.4	Fo	6	..	20858b
33	1902	13.5	-17 27	9.3	9.4	A2	1	..	15402b	83	3032	13.7	-46 20	8.4	8.2	G5	5	..	20858b
34	1794	13.5	-23 1	8.3	8.0	B9	6	1,3	18301b	84	3034	13.7	-46 24	10.0	9.7	A	1	..	20858b
35	3295	13.5	-38 5	10.3	9.7	A3	3	..	20670b	85	1228	13.7	-54 19	8.8	9.7	K5	3	..	24589b
36	2720	13.5	-49 43	9.8	9.4	Ao	4	..	24589b	86	1229	13.7	-54 42	9.3	10.3	Ko	1	..	24589b
37	1300	13.5	-53 21	9.7	10.0	Fo	4	..	24589b	87	1434	13.8	+47 7	8.6	8.6	Ao	3	..	37501i
38	1203	13.5	-55 23	9.5	10.5	Ko	1	..	24589b	88	1537	13.8	+15 22	8.3	8.4	A2	3	..	36977i
39	1202	13.5	-55 39	9.0	9.8	G5	2	..	24589b	89	1639	13.8	+ 3 43	8.5	9.9	Mb	2	..	39867b
40	237	13.6	+79 5	8.4	8.4	Ao	3	2,3	38330i	90	1771	13.8	+ 1 49	8.3	8.9	Go	2	..	37700i
41	284	13.6	+77 42	8.6	8.6	Ao	4	..	38187i	91	1897	13.8	+ 0 15	6.72	7.72	Ko	7	..	37700i
42	322	13.6	+74 3	7.40	7.40	Ao	8	..	37559i	92	1650	13.8	- 1 14	8.7	8.7	B9	4	..	39867b
43	1536	13.6	+15 50	9.0	9.1	A3	3	..	38971i	93	1872	13.8	- 7 16	9.0	9.0	B9	4	..	44407b
44	1490	13.6	+10 29	7.39	7.45	A2	4	..	36977i	94	1873	13.8	- 7 24	7.7	8.9	K5	4	..	44407b
45	1638	13.6	+ 3 2	8.5	9.1	Go	3	..	37700i	95	1976	13.8	-11 1	8.7	9.0	F2	4	..	20801b
46	1637	13.6	+ 1 58	8.3	9.3	Ko	2	..	37700i	96	1881	13.8	-16 39	9.2	9.5	F2	2	..	15402b
47	1748	13.6	-15 27	8.7	8.5	B2	3	..	15402b	97	1773	13.8	-18 36	9.5	9.5	Ao	2	..	15402b
48	1795	13.6	-23 1	8.7	8.3	B9	5	0,2	18301b	98	1857	13.8	-22 4	8.9	8.9	Ko	2	..	18301b
49	3850	13.6	-32 28	9.9	9.4	Ao	2	..	20670b	99	3879	13.8	-27 25	9.7	8.7	Ao	2	..	12666b
50	3853	13.6	-32 43	10.3	8.9	Ao	3	..	42915b	100	4130	13.8	-28 7	8.5	8.3	B9	5	0,2	12666b



THE HENRY DRAPER CATALOGUE.

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7<sup>h</sup> 13<sup>m</sup>.8

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	4178	13.8	-29 20	9.3	8.8	Ao	3	..	18926b	51	1884	14.0	-16 39	9.3	9.6	F2	2	..	15402b
2	3497	13.8	-35 1	9.20	10.0	Ko	4	..	20670b	52	1885	14.0	-17 1	9.1	8.9	B3	3	..	15402b
3	3488	13.8	-35 39	10.3	10.0	A3	2	..	20670b	53	1847	14.0	-20 25	8.7	9.1	Ko	2	..	18301b
4	3491	13.8	-36 44	10.6	10.2	A5	2	..	20670b	54	1845	14.0	-20 42	9.0	8.9	Ko	3	..	18301b
5	3448	13.8	-37 7	9.3	10.0	F5	3	..	20670b	55	1798	14.0	-22 9	6.75	8.0	Ko	4	..	42935b
6	3211	13.8	-39 31	9.9	9.9	Go	2	..	20671b	56	3495	14.0	-37 2	9.0	8.2	B8	9	..	20670b
7	2725	13.8	-49 53	7.54	6.8	Ao	2	..	8951b	57	3045	14.0	-40 28	7.3	8.7	Go	7	..	20671b
8	2403	13.8	-51 25	9.8	11.1	Ao	4	..	24589b	58	3080	14.0	-43 19	9.6	8.7	Ao	5	..	20671b
9	1231	13.8	-54 47	7.52	8.1	Ko	5	..	12757b	59	3278	14.0	-44 3	10.0	10.2	F5	2	..	20671b
10	885	13.8	-58 22	7.02	7.7	A5	8	2,8	13007b	60	1302	14.0	-53 52	7.2	8.2	Ko	6	..	24589b
11	803	13.8	-62 54	9.0	9.0	Ao	6	..	18486b	61	887	14.0	-58 38	7.3	9.4	K5	3	0,3	13007b
12	1534	13.9	+31 33	8.2	9.6	Mb	5	..	37447i	62	1418	14.1	+49 58	8.87	10.05	K5	1	..	37515i
13	1768	13.9	+20 39	8.5	9.1	Go	3	..	37472i	63	1422	14.1	+45 24	5.64	5.92	Fo	10	..	37501i
14	1539	13.9	+15 7	9.0	9.0	Ao	2	..	38971i	64	1367	14.1	+28 17	7.6	7.7	A2	8	..	38172i
15	1636	13.9	+14 7	8.8	9.6	G5	2	E	36997i	65	1495	14.1	+10 35	7.4	8.5	K2	3	..	15139b
16	1494	13.9	+10 37	7.4	7.5	A2	3	..	36977i	66	1653	14.1	- 1 28	8.1	8.1	Ao	7	..	39867b
17	1613	13.9	+ 8 57	8.1	8.2	A3	7	..	15139b	67	1876	14.1	- 7 21	9.0	9.8	G5	2	..	44407b
18	1739	13.9	+ 8 14	8.7	8.7	Ao	4	..	15139b	68	1879	14.1	- 7 49	8.5	9.5	Ko	2	..	44407b
19	1610	13.9	+ 6 32	8.3	8.8	F8	3	..	15139b	69	1974	14.1	-10 3	9.7	9.8	A2	2	..	24606b
20	1622	13.9	+ 4 59	9.11	9.11	Ao	1	..	39867b	70	1893	14.1	-12 35	10.5	11.5	Ko	1	..	24606b
21	1638	13.9	+ 2 9	8.3	8.9	Go	3	..	37700i	71	1886	14.1	-16 28	7.9	9.0	K2	3	..	15402b
22	1836	13.9	- 8 57	7.56	8.63	K2	4	2,1	20801b	72	4313	14.1	-31 31	8.7	8.6	G5	4	..	42915b
23	1972	13.9	- 9 25	9.3	9.3	B9	3	..	24606b	73	3861	14.1	-32 37	8.6	8.0	A2	5	0,2	42915b
24	1890	13.9	-12 49	10.5	10.5	A	2	..	24606b	74	3674	14.1	-33 16	8.6	9.7	K5	2	..	20670b
25	..	13.9	-13 3	..	..	Ob	1	..	24606b	75	3502	14.1	-34 58	11.7	10.9	Go	1	..	20670b
26	1883	13.9	-16 53	9.7	9.7	Ao	1	..	15402b	76	3303	14.1	-38 33	8.6	8.4	A2	7	..	20671b
27	1803	13.9	-19 40	9.1	8.6	Ao	3	..	18301b	77	3302	14.1	-38 44	6.82	7.9	K2	8	..	20670b
28	4306	13.9	-31 58	9.2	8.6	Ao	4	..	42915b	78	3301	14.1	-38 51	7.05	7.5	B8	10	..	20671b
29	3671	13.9	-33 25	9.9	10.0	K2	2	..	20670b	79	1303	14.1	-53 9	8.3	9.2	Ko	7	..	24589b
30	3670	13.9	-33 55	10.8	9.7	Ao	2	..	20670b	80	1234	14.1	-54 3	8.3	7.7	Ao	9	..	24589b
31	3500	13.9	-34 55	11.3	10.6	A2	2	..	20670b	81	547	14.1	-71 50	9.8	10.1	Fo	3	..	15168b
32	3494	13.9	-36 48	8.6	7.9	B8	9	..	20670b	82	431	14.1	-75 19	10.4	10.4	A	3	..	20652b
33	2943	13.9	-41 13	8.3	8.4	B8	7	..	20671b	83	242	14.1	-79 19	9.9	10.3	F5	2	..	20652b
34	2942	13.9	-42 1	8.6	10.5	K	1	..	20671b	84	1197	14.2	+52 10	8.6	9.6	Ko	1	..	37515i
35	1204	13.9	-55 34	7.7	8.5	Ko	4	..	12757b	85	1579	14.2	+34 41	9.5	9.6	A3	2	..	37447i
36	430	13.9	-76 1	9.6	10.2	Go	2	..	20652b	86	1645	14.2	+22 10	3.51	3.79	Fo	..	E	2220c
37	438	13.9	-76 27	9.9	11.1	K5	1	..	20652b	87	1685	14.2	+19 43	7.30	8.30	Ko	2	..	37472i
38	151	13.9	-83 36	7.59	9.0	Ko	8	..	20557b	88	1634	14.2	+13 33	8.3	8.4	A2	2	..	38971i
39	961	14.0	+61 21	9.2	9.2	A	2	..	37526i	89	1640	14.2	+ 2 54	6.06	6.84	G5	7	..	37700i
40	1205	14.0	+55 59	8.8	10.2	Mb	2	..	37526i	90	1677	14.2	- 0 10	7.78	8.34	Go	3	..	37700i
41	1699	14.0	+42 50	6.57	7.57	Ko	8	..	37501i	91	1846	14.2	- 3 49	9.2	9.2	Ao	2	..	44407b
42	1574	14.0	+21 19	8.7	8.7	Ao	3	..	37472i	92	1935	14.2	-14 4	9.1	9.1	Ao	3	..	20801b
43	1611	14.0	+ 6 39	9.0	9.0	Ao	5	..	15139b	93	1753	14.2	-15 17	9.0	9.0	Ao	5	..	15402b
44	1623	14.0	+ 5 27	9.0	9.3	Fo	3	5,2	15139b	94	1887	14.2	-16 6	8.6	9.6	Ko	2	..	15402b
45	1659	14.0	+ 3 59	8.7	9.3	Go	1	..	39867b	95	5165	14.2	-24 40	10.2	8.6	B8	2	..	12666b
46	1651	14.0	- 2 2	9.7	9.7	Ao	2	E	39867b	96	4142	14.2	-28 46	9.3	8.4	Ao	5	0,2	18926b
47	1900	14.0	- 5 3	8.75	9.93	K5	1	..	44407b	97	4259	14.2	-30 16	8.1	8.0	Ao	2	..	8905b
48	2065	14.0	- 5 15	8.5	8.5	Ao	2	..	38609i	98	4260	14.2	-30 46	7.8	8.0	Ao	3	1,8	8905b
49	..	14.0	-10 12	..	..	A3	2	..	24606b	99	3492	14.2	-35 57	9.2	10.9	K5	2	..	20670b
50	1891	14.0	-12 19	10.4	10.5	A2	2	..	24606b	100	3218	14.2	-39 20	9.9	9.1	Ao	6	..	20671b



## ANNALS OF HARVARD COLLEGE OBSERVATORY.

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7<sup>h</sup> 14<sup>m</sup>.2

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	3040	14.2	-46 31	8.4	8.1	Ko	4	..	20858b	51	1680	14.5	- 0 44	8.5	8.5	B8	5	..	39867b
2	215	14.2	-81 57	9.6	10.0	F5	2	..	20557b	52	2050	14.5	- 2 23	8.7	8.7	Ao	3	E	39867b
3	323	14.3	+73 58	9.2	10.3	K2	1	..	38187i	53	1979	14.5	- 9 58	10.6	10.6	Ao	1	..	24606b
4	1525	14.3	+32 29	9.0	9.1	A2	2	..	37447i	54	1982	14.5	-10 32	10.0	10.0	B9	3	..	24606b
5	1616	14.3	+ 9 4	9.0	10.2	K5	1	..	15139b	55	1983	14.5	-10 44	9.0	10.4	Ma	2	..	24606b
6	1684	14.3	+ 7 19	5.95	6.45	F8	9	..	15139b	56	1885	14.5	-11 17	9.1	10.5	Mb	2	..	24606b
7	1900	14.3	+ 0 16	8.3	9.3	Ko	2	..	39867b	57	1894	14.5	-13 5	9.1	10.1	Ko	2	..	24606b
8	1936	14.3	-13 15	9.5	9.5	Ao	4	..	24606b	58	1761	14.5	-15 7	9.3	9.3	Ao	1	..	15402b
9	1937	14.3	-13 34	10.4	10.5	A2	3	..	24606b	59	1758	14.5	-15 45	9.0	9.0	B9	5	..	15402b
10	1777	14.3	-18 48	9.1	9.1	B9	4	..	15402b	60	5173	14.5	-24 23	4.90	..	Oe	..	0, R	28,200
11	1806	14.3	-19 15	8.9	8.6	A2	2	..	18301b	61	5176	14.5	-24 47	4.40	..	Oe5	..	0, R	28,200
12	5250	14.3	-23 23	8.3	8.5	Ko	4	..	18301b	62	3697	14.5	-33 18	9.9	8.8	G5	5	..	20670b
13	4187	14.3	-29 32	9.5	8.9	B9	2	..	18926b	63	3497	14.5	-35 26	8.7	8.9	B8	6	..	20670b
14	4186	14.3	-29 55	10.0	9.1	B9	2	..	18926b	64	3507	14.5	-36 20	11.7	11.1	A	1	..	20670b
15	3503	14.3	-34 29	10.3	10.0	A5	3	..	20670b	65	3087	14.5	-43 25	9.4	9.0	B9	6	..	20671b
16	3500	14.3	-36 18	11.3	10.6	Ao	2	..	20670b	66	1420	14.6	+50 20	7.32	7.60	Fo	7	R	37515i
17	3048	14.3	-40 5	9.25	9.6	G5	2	..	20671b	67	1420	14.6	+50 20	7.42	7.70	Fo	7	R	37515i
18	2948	14.3	-41 57	8.7	9.6	G5	4	..	20671b	68	1255	14.6	+46 25	8.0	9.1	K2	1	..	37501i
19	2668	14.3	-50 8	9.09	9.6	Ko	3	..	24589b	69	1511	14.6	+29 55	7.11	7.17	A2	8	0,8	38172i
20	723	14.3	-67 30	9.0	10.1	K2	1	..	15223b	70	1770	14.6	+20 18	8.2	8.2	B9	4	..	37472i
21	613	14.3	-70 22	9.2	9.6	F5	5	..	15168b	71	1740	14.6	+ 8 11	8.3	8.3	Ao	6	..	15139b
22	1061	14.4	+57 7	8.6	9.7	K2	2	..	37526i	72	1644	14.6	+ 3 45	9.0	9.8	G5	1	..	39867b
23	1541	14.4	+31 40	9.4	10.8	Mb	4	R	37447i	73	1643	14.6	+ 2 30	8.7	9.7	Ko	1	..	39867b
24	1612	14.4	+ 6 31	9.4	9.8	F5	2	..	15139b	74	1847	14.6	- 3 26	8.3	9.3	Ko	2	..	38609i
25	1772	14.4	+ 1 31	9.2	9.2	Ao	3	..	39867b	75	1904	14.6	- 4 16	9.1	9.2	A2	2	..	44407b
26	1884	14.4	-11 58	10.2	10.3	A2	2	..	24606b	76	1887	14.6	- 7 29	10.4	10.5	A2	2	..	44407b
27	1939	14.4	-13 17	9.1	10.3	K5	3	..	24606b	77	1885	14.6	- 7 33	8.9	9.5	Go	2	..	44407b
28	1809	14.4	-19 56	8.38	8.5	A2	3	..	20767b	78	1839	14.6	- 8 36	7.36	8.71	Ma	4	..	20801b
29	1807	14.4	-19 57	8.30	8.2	B9	4	..	20767b	79	1983	14.6	- 9 24	10.4	10.4	Ao	2	..	24606b
30	1805	14.4	-22 56	9.5	8.9	B9	2	..	20767b	80	1985	14.6	-10 20	8.7	8.7	Ao	5	..	20801b
31	4190	14.4	-29 43	8.3	8.8	Ma	3	5,3	42915b	81	1984	14.6	-10 39	9.1	10.1	K	2	..	24606b
32	4318	14.4	-31 35	9.7	9.2	A3	2	..	42915b	82	1896	14.6	-12 13	10.0	10.0	B9	3	..	24606b
33	3506	14.4	-34 9	10.3	10.9	G5	1	..	20670b	83	1895	14.6	-13 4	9.7	10.7	Ko	1	..	24606b
34	3502	14.4	-36 59	8.7	8.0	B8	9	..	20670b	84	1941	14.6	-13 27	8.9	9.9	Ko	5	..	24606b
35	3454	14.4	-37 39	9.9	10.9	Ko	2	..	20670b	85	1824	14.6	-14 12	9.1	10.1	Ko	3	..	24606b
36	3086	14.4	-44 1	10.9	10.2	A3	2	..	20671b	86	1825	14.6	-14 24	8.6	9.6	Ko	2	0,2	15402b
37	3042	14.4	-46 7	9.2	8.7	A5	4	..	20858b	87	1892	14.6	-17 2	6.83	7.83	Ko	3	..	8903b
38	2669	14.4	-50 3	9.04	9.0	Fo	4	..	24589b	88	1913	14.6	-17 52	8.9	9.2	Fo	3	..	15402b
39	2412	14.4	-51 25	9.4	9.6	F2	4	..	24589b	89	1812	14.6	-19 17	9.0	8.5	B8	3	..	1839ab
40	1304	14.4	-53 16	9.4	9.5	A2	5	..	24589b	90	5258	14.6	-24 2	10.0	8.8	B9	2	..	18301b
41	1235	14.4	-55 3	9.5	10.5	Ko	1	..	24589b	91	5178	14.6	-24 29	10.2	8.3	Ao	4	..	12666b
42	1205	14.4	-55 56	8.4	9.1	F5	2	..	12757b	92	4200	14.6	-29 27	9.5	8.9	Ao	2	..	18926b
43	440	14.4	-76 52	9.5	10.0	F8	4	..	20652b	93	3871	14.6	-32 6	9.9	8.6	Ao	4	..	42915b
44	375	14.5	+73 16	6.96	7.24	Fo	7	..	37559i	94	3498	14.6	-35 40	8.6	9.2	F2	5	..	20670b
45	1314	14.5	+51 28	9.0	9.8	G5	2	..	37515i	95	3046	14.6	-46 49	7.6	7.4	Ko	8	..	20858b
46	1254	14.5	+46 25	8.0	8.5	F8	4	..	37501i	96	1306	14.6	-53 48	9.1	10.5	Ma	2	..	24589b
47	1923	14.5	+39 15	8.4	8.4	Ao	5	0,4	37447i	97	1179	14.6	-57 28	9.1	10.0	Ko	1	..	13007b
48	1448	14.5	+16 19	7.7	8.7	Ko	5	5,4	37570i	98	430	14.6	-74 27	9.5	10.7	K5	1	..	20652b
49	1541	14.5	+15 21	6.47	6.47	Ao	10	..	37570i	99	432	14.6	-75 14	9.6	9.9	F2	3	..	20652b
50	1613	14.5	+ 6 41	8.3	9.3	Ko	1	..	15139b	100	253	14.7	+78 26	8.8	9.6	G5	2	..	38331i

THE HENRY DRAPER CATALOGUE.

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7<sup>h</sup> 14<sup>m</sup>.7

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	630	m. 14.7	° 64 19	7.34	7.40	A2	6	0,8	37713i	51	3226	m. 14.8	° -39 54	8.15	8.7	Ko	6	..	20671b
2	1192	14.7	+55 28	6.53	6.48	A	..	R	56,83	52	3057	14.8	-40 19	10.6	9.9	A	1	..	20670b
3	1706	14.7	+55 28	5.61	5.56	B8	..	..	..	53	204	14.9	+82 12	8.6	9.0	F5	3	..	37546i
4	1367	14.7	+37 51	6.82	7.82	Ko	7	..	37447i	54	419	14.9	+68 57	8.8	9.3	F8	2	..	38155i
5	1525	14.7	+27 31	9.4	9.7	Fo	2	..	38172i	55	498	14.9	+66 0	7.33	7.47	A5	7	3,8	37713i
6	1681	14.7	+26 48	8.4	9.5	K2	2	..	38172i	56	1594	14.9	+35 47	9.1	10.1	Ko	1	..	37447i
7	1577	14.7	+23 49	8.6	8.7	A2	3	..	37472i	57	1582	14.9	+34 38	9.5	10.3	G5	2	..	37447i
8	1640	14.7	+18 3	7.9	8.9	Ko	2	..	37472i	58	1583	14.9	+34 12	8.0	8.0	Ao	7	..	37447i
9	1741	14.7	+14 24	9.0	9.0	Ao	3	..	38971i	59	1368	14.9	+27 32	9.5	9.8	F2	1	..	38172i
10	1774	14.7	+ 8 53	9.4	9.4	Ao	2	..	15139b	60	1643	14.9	+25 10	9.8	..	Nb	..	..	M
11	1656	14.7	+ 1 49	9.2	9.2	Ao	2	..	37700i	61	1578	14.9	+18 4	8.4	8.4	Ao	5	..	37472i
12	2068	14.7	- 1 49	9.2	9.2	Ao	2	..	39867b	62	1616	14.9	+ 6 15	10.0	10.1	A2	3	..	15139b
13	1987	14.7	- 5 43	9.2	9.5	F2	2	..	44407b	63	1986	14.9	- 9 35	9.0	10.2	K5	3	R	24606b
14	1986	14.7	-10 23	9.7	9.7	Ao	1	..	24606b	64	1987	14.9	- 9 47	9.5	9.5	B9	2	..	24606b
15	1898	14.7	-11 1	9.3	9.3	Ao	3	..	20801b	65	1887	14.9	-11 27	10.0	10.0	Ao	4	..	24606b
16	1898	14.7	-12 20	8.9	8.9	B9	3	..	20801b	66	1830	14.9	-14 15	10.6	10.6	Ao	1	..	24606b
17	1914	14.7	-17 55	8.9	8.9	B9	4	..	15402b	67	1898	14.9	-16 12	var.	var.	Fo	..	0,5 R	56,84
18	1813	14.7	-19 6	6.18	7.0	Fo	..	5,5	56,83	68	1851	14.9	-20 29	9.0	8.6	B9	1	..	18301b
19	4202	14.7	-29 7	8.9	8.2	B9	5	..	18926b	69	1870	14.9	-21 46	10.4	9.1	A3	2	..	18301b
20	4276	14.7	-30 37	6.88	7.5	B3	5	0,9	8905b	70	4283	14.9	-31 3	8.9	8.0	Ao	7	0,2	42915b
21	4325	14.7	-31 49	9.3	9.2	Ao	3	..	42915b	71	3458	14.9	-37 24	9.2	9.4	A2	6	..	20670b
22	3873	14.7	-32 10	6.80	7.3	B9	7	0,4	8905b	72	3457	14.9	-38 0	10.3	10.6	Ao	2	..	20670b
23	3089	14.7	-43 50	9.8	9.3	Go	2	..	20671b	73	3058	14.9	-40 37	8.6	9.9	K2	2	..	20671b
24	1208	14.7	-55 46	8.3	8.8	F5	3	..	12757b	74	3074	14.9	-45 28	10.2	9.6	F5	2	..	20671b
25	810	14.7	-60 21	7.9	8.3	A2	4	..	18486b	75	3073	14.9	-45 37	9.1	8.8	Fo	3	..	20858b
26	806	14.7	-63 0	9.0	10.2	K5	1	..	15176b	76	2417	14.9	-51 58	11.5	10.8	A3	1	..	24589b
27	436	14.7	-73 33	9.4	10.4	Ko	2	..	20652b	77	486	15.0	+67 19	7.6	7.6	Ao	8	1,7	37713i
28	376	14.8	+73 16	7.8	8.1	Fo	5	..	37559i	78	963	15.0	+61 39	8.4	8.5	A2	7	..	37526i
29	1138	14.8	+53 2	8.0	9.1	K2	3	..	37515i	79	1680	15.0	+43 37	8.7	9.2	F8	2	..	37501i
30	1544	14.8	+31 48	9.0	9.3	F2	3	..	37447i	80	1639	15.0	+41 30	7.64	8.42	G5	5	..	37501i
31	1549	14.8	+17 36	8.5	8.5	Ao	4	E	37570i	81	1545	15.0	+31 44	10.0	10.0	Ao	2	..	37447i
32	1665	14.8	+ 3 57	8.3	9.3	Ko	3	..	37700i	82	1644	15.0	+25 52	8.6	8.7	A2	2	..	38172i
33	1644	14.8	+ 2 37	8.1	8.4	Fo	5	..	37700i	83	1903	15.0	+ 0 9	9.0	9.1	A3	2	..	37700i
34	1659	14.8	- 1 8	8.3	8.4	A2	6	..	39867b	84	1907	15.0	- 4 24	7.7	7.8	A2	5	..	38609i
35	1658	14.8	- 1 14	8.5	9.6	K2	2	..	39867b	85	2070	15.0	- 5 51	9.1	9.7	Go	1	..	44407b
36	2069	14.8	- 5 6	9.20	9.98	G5	1	..	44407b	86	..	15.0	-11 11	..	..	A2	3	..	24606b
37	1984	14.8	- 9 39	10.2	10.2	A	1	..	24606b	87	1889	15.0	-12 2	9.1	9.1	B9	2	..	20801b
38	1895	14.8	-16 37	8.9	9.2	F2	2	..	15402b	88	1944	15.0	-13 23	9.3	9.3	B9	5	..	24606b
39	1917	14.8	-17 21	6.60	6.55	B8	6	0,4	8903b	89	1766	15.0	-15 42	7.9	7.9	Ao	2	..	8903b
40	1916	14.8	-17 40	8.6	9.1	F8	2	..	15402b	90	1871	15.0	-21 52	6.84	7.0	A2	5	..	42935b
41	1780	14.8	-18 8	9.1	9.1	Ao	2	..	15402b	91	1809	15.0	-22 13	10.0	9.1	Ao	1	..	18301b
42	1850	14.8	-20 27	9.1	8.8	A	2	..	18301b	92	5188	15.0	-24 47	7.30	6.5	B3	..	0,5	28,200
43	1869	14.8	-21 17	9.2	8.8	Ao	3	..	18301b	93	4354	15.0	-25 23	7.4	7.5	B5	6	0,4	12666b
44	1867	14.8	-21 24	9.1	8.9	G5	3	..	18301b	94	3516	15.0	-36 36	9.5	7.9	Ao	4	..	20670b
45	5262	14.8	-23 36	8.7	7.7	A5	5	..	18301b	95	3517	15.0	-36 43	9.7	10.5	Ko	1	..	20670b
46	4164	14.8	-26 25	5.40	6.6	Gop	..	R	28,200	96	3229	15.0	-39 31	10.3	10.1	Ao	2	..	20671b
47	4154	14.8	-28 49	9.0	8.7	B8	3	..	18926b	97	3093	15.0	-43 49	5.96	5.9	B9	..	0,7	56,123
48	3511	14.8	-34 17	11.3	10.0	Ao	2	..	20670b	98	1297	15.0	-56 15	8.5	9.2	Ko	1	..	12757b
49	3513	14.8	-36 3	9.5	10.0	A2	3	..	20670b	99	726	15.0	-67 53	8.4	8.9	F8	5	..	15223b
50	3512	14.8	-36 33	4.68	4.51	B3	..	R	28,200	100	250	15.0	-78 39	10.9	11.0	A3	2	..	20652b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

57200

7<sup>h</sup> 15<sup>m</sup>.1

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	420	15.1	+69 38	8.6	9.1	F8	2	..	37559i	51	2071	15.3	- 5 47	9.5	9.5	Ao	2	..	44407b
2	1063	15.1	+57 10	8.2	8.8	Go	3	..	37526i	52	2073	15.3	- 5 57	7.7	8.7	Ko	3	..	38609i
3	1423	15.1	+45 51	8.9	9.9	Ko	2	..	37501i	53	1902	15.3	-12 13	10.0	10.4	F5	4	..	24606b
4	1842	15.1	+40 9	8.2	9.0	G5	2	..	37501i	54	1903	15.3	-12 29	10.0	10.0	Ao	3	..	24606b
5	1740	15.1	+38 21	8.4	8.8	F5	2	..	37447i	55	1901	15.3	-12 36	10.2	10.2	Ao	3	..	24606b
6	1528	15.1	+26 40	8.0	8.0	Ao	5	..	38172i	56	1948	15.3	-13 35	8.9	9.9	Ko	6	..	24606b
7	1645	15.1	+25 13	9.4	9.4	Ao	1	..	38172i	57	1921	15.3	-17 21	9.2	9.3	A2	2	..	15402b
8	1545	15.1	+15 51	9.0	9.0	Ao	2	..	37570i	58	1786	15.3	-18 30	8.7	8.7	B8	5	..	15402b
9	1619	15.1	+ 8 57	8.5	8.6	A2	4	E	37581i	59	3099	15.3	-43 31	9.6	9.1	A3	6	..	20671b
10	1647	15.1	+ 3 25	9.0	9.1	A3	3	..	39867b	60	692	15.3	-64 28	8.9	9.9	Ko	1	..	15176b
11	1646	15.1	+ 3 6	9.7	9.8	A3	2	..	39867b	61	253	15.3	-78 44	9.2	9.5	F2	6	..	20652b
12	1850	15.1	- 3 43	6.84	7.84	Ko	5	..	38609i	62	1200	15.4	+52 27	7.8	8.2	F5	4	..	37515i
13	1908	15.1	- 4 49	7.10	7.24	A5	7	..	38609i	63	1927	15.4	+39 11	6.48	7.48	Ko	7	0,7	37447i
14	1889	15.1	- 7 43	8.9	10.3	Ma	1	..	44407b	64	1707	15.4	+36 57	5.21	6.21	Ko	10	..	37447i
15	1843	15.1	- 9 1	8.5	8.5	Ao	4	0,2	20801b	65	1585	15.4	+34 53	8.92	9.99	K2	2	..	37447i
16	1890	15.1	-11 18	10.4	10.5	A2	2	..	24606b	66	1551	15.4	+31 16	8.5	9.5	Ko	4	..	37447i
17	1783	15.1	-18 35	9.3	9.3	Ao	2	..	15402b	67	1531	15.4	+26 21	7.9	8.5	Go	5	..	38172i
18	4334	15.1	-31 50	9.7	8.6	B9	4	..	42915b	68	1642	15.4	+14 13	8.3	8.7	F5	2	..	38971i
19	3519	15.1	-36 34	5.11	4.94	B3	..	R	28,200	69	1637	15.4	+13 16	7.73	7.81	A3	5	..	37570i
20	3521	15.1	-37 3	8.3	8.3	B5	8	..	20670b	70	1620	15.4	+ 9 50	7.42	7.84	F5	5	0,6	37891i
21	3230	15.1	-40 1	9.3	9.6	Ao	3	..	20671b	71	1627	15.4	+ 5 18	9.0	9.0	Ao	2	..	15139b
22	1180	15.1	-57 50	8.2	9.4	Ko	3	..	13007b	72	1648	15.4	+ 3 6	9.0	9.1	A2	2	..	37700i
23	431	15.1	-74 51	10.0	10.5	F8	2	..	20652b	73	1647	15.4	+ 2 30	8.8	8.9	A2	2	1,2	39867b
24	433	15.1	-76 1	9.6	10.4	G5	2	..	20652b	74	1778	15.4	+ 1 17	9.0	9.8	G5	1	..	39867b
25	1064	15.2	+57 46	8.1	8.6	F8	4	..	37526i	75	1909	15.4	+ 0 35	6.83	6.81	B9	8	1,7	37700i
26	1843	15.2	+40 43	8.5	9.7	K5	1	..	37501i	76	1912	15.4	- 4 46	9.1	10.3	K5	1	..	44407b
27	1608	15.2	+36 16	9.0	10.0	Ko	2	..	37447i	77	..	15.4	-11 26	..	..	Ao	1	..	24606b
28	1526a	15.2	+32 14	7.93	9.28	Ma	4	..	37447i	78	1893	15.4	-11 34	9.7	10.8	K2	1	..	24606b
29	1514	15.2	+29 9	8.4	9.4	Ko	2	..	38172i	79	1836	15.4	-14 6	9.2	9.2	Ao	3	..	20801b
30	1891	15.2	- 7 31	8.6	8.6	B8	4	..	44407b	80	1818	15.4	-19 48	8.5	8.2	B9	5	..	18301b
31	1991	15.2	-10 7	9.21	10.21	Ko	2	..	24606b	81	5277	15.4	-23 51	10.0	7.9	B9	4	..	18301b
32	1891	15.2	-11 44	9.1	10.1	Ko	1	..	24606b	82	3525	15.4	-36 47	10.1	10.9	Ko	1	..	20670b
33	1900	15.2	-12 22	10.2	10.0	B	2	R	24606b	83	2963	15.4	-41 18	10.3	10.1	G	1	..	20671b
34	1834	15.2	-15 5	8.11	8.06	B8	4	..	15402b	84	3123	15.4	-42 17	8.6	9.6	G5	3	..	20671b
35	1768	15.2	-15 20	9.1	9.7	Go	2	..	15402b	85	1241	15.4	-54 44	9.3	10.3	Ko	1	..	24589b
36	1874	15.2	-21 49	8.7	8.5	Bo	3	..	18301b	86	726	15.4	-66 1	9.5	9.9	F5	3	..	15223b
37	1811	15.2	-22 15	10.0	8.8	B9	1	..	20767b	87	437	15.4	-73 58	8.8	9.1	F2	7	..	20652b
38	4161	15.2	-28 50	7.54	8.7	K2	5	..	18926b	88	1703	15.5	+42 39	9.2	9.2	Ao	2	..	37501i
39	3308	15.2	-38 19	9.5	9.9	K2	3	..	20670b	89	1649	15.5	+25 24	8.6	8.9	F	1	..	38172i
40	3309	15.2	-39 2	5.24	5.30	A2	..	2,5 R	56,123	90	1505	15.5	+10 23	7.60	7.60	Ao	6	0,6	37891i
41	2961	15.2	-41 47	7.8	9.4	Ko	4	..	20671b	91	1649	15.5	+ 3 46	6.84	6.72	B5	8	..	37580i
42	2676	15.2	-50 52	9.6	9.6	Ao	5	..	24589b	92	1682	15.5	- 1 1	8.5	8.6	A2	3	..	39867b
43	1133	15.2	-52 53	10.2	10.5	F2	1	..	24589b	93	1663	15.5	- 1 25	7.9	7.9	B9	6	..	39867b
44	252	15.2	-78 47	8.7	9.8	K2	5	R	20652b	94	1662	15.5	- 1 33	9.0	10.2	K5	1	..	39867b
45	1926	15.3	+39 20	8.2	8.2	Ao	5	2,4	37447i	95	2056	15.5	- 6 13	9.1	9.1	Ao	3	..	44407b
46	1596	15.3	+35 5	8.4	8.7	Fo	6	..	37447i	96	1847	15.5	- 8 15	9.2	10.2	Ko	1	..	44407b
47	1549	15.3	+31 4	9.0	9.0	Ao	2	..	37447i	97	1848	15.5	- 8 29	9.2	9.2	A	2	..	44407b
48	1369	15.3	+27 16	8.2	8.6	F5	3	..	38172i	98	..	15.5	-11 23	..	..	Ao	2	..	24606b
49	1907	15.3	+ 0 20	9.0	9.0	A	1	..	36745i	99	3696	15.5	-33 33	6.43	7.9	Ko	7	..	42915b
50	1906	15.3	+ 0 18	9.0	9.0	A	1	..	36745i	100	3695	15.5	-33 39	9.9	8.6	Ao	4	..	18926b

## THE HENRY DRAPER CATALOGUE.

57300

7<sup>h</sup> 15<sup>m</sup>.5

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
		m.	°									m.	°						
1	3517	15.5	-35 0	7.75	8.0	B <sub>9</sub>	8	..	42915b	51	3699	15.7	-33 28	11.7	10.2	A <sub>0</sub>	2	..	20670b
2	3102	15.5	-43 45	9.6	9.6	F <sub>5</sub>	5	..	20671b	52	3521	15.7	-34 52	8.9	9.1	G <sub>5</sub>	4	..	42915b
3	2853	15.5	-48 54	8.5	9.9	K <sub>5</sub>	1	..	20858b	53	3467	15.7	-37 9	7.9	8.2	A <sub>0</sub>	8	..	20670b
4	1136	15.5	-52 13	10.0	10.8	G <sub>5</sub>	1	..	24589b	54	3465	15.7	-37 29	10.8	10.0	A <sub>3</sub>	4	..	20670b
5	1135	15.5	-52 38	9.7	10.5	G <sub>5</sub>	1	..	24589b	55	3466	15.7	-37 52	6.96	8.2	K <sub>0</sub>	8	..	20670b
6	1242	15.5	-54 19	9.0	9.5	F <sub>8</sub>	3	..	24589b	56	3057	15.7	-46 39	9.0	9.0	G <sub>5</sub>	3	..	20858b
7	..	15.5	-76 31	..	..	G <sub>5</sub>	1	..	20652b	57	2422	15.7	-51 51	7.8	8.2	A <sub>0</sub>	8	..	24589b
8	422	15.6	+69 41	7.92	8.48	G <sub>0</sub>	3	..	37559i	58	1182	15.7	-57 43	7.7	8.5	K <sub>0</sub>	5	..	13007b
9	1137	15.6	+54 17	8.0	8.0	B <sub>9</sub>	4	..	37526i	59	1183	15.7	-58 1	9.5	9.5	A <sub>0</sub>	2	..	13007b
10	1535	15.6	+26 7	9.0	9.0	A <sub>0</sub>	2	..	38172i	60	808	15.7	-59 27	9.4	9.5	A <sub>2</sub>	2	..	18486b
11	1532	15.6	+26 2	8.2	9.3	K <sub>2</sub>	3	..	38172i	61	1511	15.8	+33 6	9.4	10.5	K <sub>2</sub>	3	..	37447i
12	1453	15.6	+16 10	8.3	8.3	A <sub>0</sub>	6	..	37891i	62	1488	15.8	+30 1	8.11	8.53	F <sub>5</sub>	4	3,5	38172i
13	1621	15.6	+6 25	7.6	8.4	G <sub>5</sub>	6	0,5-	37580i	63	1667	15.8	+4 15	8.7	8.7	A <sub>0</sub>	4	..	12755b
14	1652a	15.6	+3 39	9.0	9.0	A <sub>0</sub>	3	..	39867b	64	1915	15.8	-5 5	8.75	9.75	K <sub>0</sub>	2	..	44407b
15	1651	15.6	+3 35	8.3	8.3	B <sub>9</sub>	5	..	39867b	65	1998	15.8	-10 47	9.1	9.9	G <sub>5</sub>	3	..	24606b
16	1648	15.6	+2 26	8.7	9.5	G <sub>5</sub>	2	0,1	37700i	66	1997	15.8	-10 55	9.7	10.0	F <sub>0</sub>	2	..	24606b
17	1910	15.6	+0 32	9.0	9.0	A <sub>0</sub>	3	..	39867b	67	1996	15.8	-11 4	8.5	8.6	A <sub>2</sub>	3	..	20801b
18	2074	15.6	-5 51	8.9	9.9	K <sub>0</sub>	2	..	44407b	68	1952	15.8	-13 11	9.5	9.5	A <sub>0</sub>	3	..	24606b
19	2057	15.6	-6 25	7.9	8.7	G <sub>5</sub>	2	..	38609i	69	1953	15.8	-13 21	8.5	9.6	K <sub>2</sub>	4	..	24606b
20	1850	15.6	-8 10	8.5	9.5	K <sub>0</sub>	3	..	44407b	70	1880	15.8	-21 42	9.1	8.2	B <sub>3</sub>	5	..	18301b
21	1849	15.6	-8 22	7.06	7.34	F <sub>0</sub>	7	..	20801b	71	5288	15.8	-23 15	10.7	8.9	A <sub>0</sub>	1	..	20767b
22	1904	15.6	-12 6	8.7	9.8	K <sub>2</sub>	1	..	20801b	72	5211	15.8	-24 15	8.7	8.0	B <sub>8</sub>	8	..	18301b
23	1905	15.6	-12 39	9.7	10.5	G <sub>5</sub>	2	..	24606b	73	3512	15.8	-35 37	9.3	10.2	K <sub>0</sub>	3	..	20670b
24	1951	15.6	-13 49	8.1	9.3	K <sub>5</sub>	2	..	20801b	74	3514	15.8	-35 54	10.3	9.7	A <sub>0</sub>	4	..	20670b
25	5285	15.6	-23 53	9.3	8.2	A <sub>0</sub>	5	..	18301b	75	711	15.8	-63 57	8.0	8.4	F <sub>5</sub>	8	..	18486b
26	4186	15.6	-26 23	8.7	8.3	A <sub>0</sub>	5	1,3	12666b	76	439	15.8	-73 59	8.8	9.1	F <sub>2</sub>	6	..	20652b
27	4302	15.6	-30 55	10.2	9.2	A <sub>0</sub>	2	..	42915b	77	239	15.9	+79 21	8.8	9.8	K <sub>0</sub>	1	..	38331i
28	3697	15.6	-33 38	10.1	10.0	K <sub>0</sub>	1	..	20670b	78	1424	15.9	+45 10	8.7	9.3	G <sub>0</sub>	2	..	37501i
29	3520	15.6	-34 30	11.0	10.5	A <sub>0</sub>	2	..	20670b	79	1744	15.9	+38 16	9.0	9.0	B <sub>9</sub>	4	..	37447i
30	3519	15.6	-34 40	9.2	8.8	B <sub>9</sub>	4	..	42915b	80	1512	15.9	+33 24	8.1	8.1	B <sub>9</sub>	7	..	37447i
31	3510	15.6	-35 59	8.3	7.8	B <sub>9</sub>	8	..	20670b	81	1553	15.9	+31 3	8.0	8.4	F <sub>5</sub>	2	..	37447i
32	2967	15.6	-41 19	9.9	9.6	F <sub>8</sub>	4	..	20671b	82	1489	15.9	+30 28	8.1	9.1	K <sub>0</sub>	2	0,2	38172i
33	3127	15.6	-42 16	7.8	9.4	K <sub>0</sub>	4	..	20671b	83	1558	15.9	+11 12	7.4	8.4	K <sub>0</sub>	3	5,3	37891i
34	2680	15.6	-50 52	7.6	7.9	G <sub>0</sub>	9	..	24589b	84	1684	15.9	-0 29	9.7	9.8	A <sub>3</sub>	1	..	39867b
35	300	15.6	-77 14	9.0	10.0	K <sub>0</sub>	4	..	20652b	85	2075	15.9	-5 57	7.02	7.02	A <sub>0</sub>	6	..	38609i
36	243	15.6	-79 16	7.4	7.4	A <sub>0</sub>	10	..	20652b	86	1856	15.9	-8 15	8.1	8.1	B <sub>9</sub>	3	..	38609i
37	1704	15.7	+42 51	7.7	7.8	A <sub>5</sub>	7	..	37501i	87	1993	15.9	-10 0	9.3	9.3	A <sub>0</sub>	3	..	24606b
38	1651	15.7	+25 5	9.4	9.4	A	1	..	38172i	88	1999	15.9	-10 23	9.2	9.5	F <sub>0</sub>	4	..	24606b
39	1456	15.7	+16 54	9.0	10.0	K <sub>0</sub>	1	..	37570i	89	1895	15.9	-11 48	10.0	10.0	A <sub>0</sub>	4	..	24606b
40	1641	15.7	+13 21	7.5	7.6	A <sub>3</sub>	7	..	37570i	90	1840	15.9	-14 41	9.2	10.4	K <sub>5</sub>	2	..	24606b
41	1640	15.7	+13 2	8.7	9.9	K <sub>5</sub>	1	..	38971i	91	1923	15.9	-17 41	8.5	8.9	F <sub>5</sub>	4	..	15402b
42	1649	15.7	+2 6	9.0	9.8	G <sub>5</sub>	1	..	39867b	92	1817	15.9	-22 43	8.7	8.5	B <sub>8</sub>	4	..	18301b
43	1683	15.7	-0 40	7.7	7.8	A <sub>5</sub>	7	5,4	39867b	93	5296	15.9	-23 55	10.2	8.5	B	4	..	18301b
44	1992	15.7	-9 28	8.7	8.8	A <sub>5</sub>	4	2,1	20801b	94	3933	15.9	-27 47	9.0	8.0	B <sub>9</sub>	5	..	12666b
45	1904	15.7	-16 39	8.7	9.7	K <sub>0</sub>	1	..	15402b	95	3525	15.9	-34 4	8.6	9.4	K <sub>0</sub>	4	..	42915b
46	1857	15.7	-20 31	6.79	6.9	A <sub>0</sub>	5	..	42935b	96	3526	15.9	-34 11	10.3	10.9	K <sub>2</sub>	1	..	20670b
47	5206	15.7	-24 49	10.0	8.6	B <sub>9</sub>	6	1,3	18301b	97	3238	15.9	-39 56	9.25	9.3	G <sub>0</sub>	4	..	20671b
48	3884	15.7	-32 5	10.3	9.2	B <sub>9</sub>	3	..	42915b	98	3130	15.9	-42 51	11.5	10.1	F <sub>5</sub>	2	..	20671b
49	3887	15.7	-32 39	10.3	9.7	G <sub>0</sub>	3	..	20670b	99	3059	15.9	-46 18	8.6	9.0	K <sub>0</sub>	3	..	20858b
50	3698	15.7	-33 12	10.8	10.3	A	1	..	20670b	100	2684	15.9	-50 26	9.8	10.2	F <sub>2</sub>	2	..	24589b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

57400

7<sup>h</sup> 16<sup>m</sup>.0

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1438	16.0	+47 12	9.2	10.2	K	1	..	37501i	51	1560	16.2	+10 56	8.3	8.3	B9	4	E	37581i
2	1529	16.0	+32 28	8.8	9.8	Ko	1	..	37447i	52	1650	16.2	+ 2 3	9.4	9.4	Ao	1	..	39867b
3	1516	16.0	+29 44	8.5	8.9	F5	1	..	38172i	53	1780	16.2	+ 1 52	9.0	10.0	Ko	1	..	39867b
4	1622	16.0	+ 9 19	9.0	9.1	A3	3	E	37581i	54	1854	16.2	- 3 11	8.5	8.5	Ao	2	..	38609i
5	1670	16.0	+ 4 28	8.5	8.5	Ao	4	..	12755b	55	1856	16.2	- 3 16	8.9	8.9	Ao	3	..	44407b
6	1913	16.0	+ 0 12	9.0	9.1	A5	2	..	39867b	56	1907	16.2	-12 37	10.0	10.4	F5	1	..	24606b
7	2076	16.0	- 5 10	9.2	9.6	F5	2	..	44407b	57	1774	16.2	-15 57	8.96	9.46	F8	2	..	15402b
8	1956	16.0	-13 27	9.2	9.2	Ao	5	..	24606b	58	1793	16.2	-18 8	8.6	9.8	K5	1	..	15402b
9	4179	16.0	-28 19	9.2	8.7	A2	4	..	12666b	59	5224	16.2	-24 20	9.7	9.0	A5	4	..	18301b
10	3702	16.0	-33 7	11.3	10.2	A2	2	..	20670b	60	3520	16.2	-35 56	9.9	9.4	Ao	5	..	20670b
11	3470	16.0	-37 19	7.9	7.6	B8	10	..	20670b	61	3478	16.2	-37 38	8.6	8.8	Ao	7	..	20670b
12	3472	16.0	-37 38	10.6	10.3	Ao	3	..	20670b	62	3322	16.2	-38 25	9.9	9.3	B9	5	..	20670b
13	3471	16.0	-37 57	9.9	11.1	Ko	1	..	20670b	63	3321	16.2	-38 49	9.7	9.6	K2	2	..	20671b
14	2976	16.0	-41 11	11.0	10.1	Ao	2	..	20671b	64	3314	16.2	-44 15	9.1	9.9	Ko	2	..	20671b
15	3088	16.0	-45 7	7.14	7.5	F5	8	..	20858b	65	2861	16.2	-48 57	9.2	9.1	F5	2	..	20858b
16	3089	16.0	-45 53	10.0	8.8	A5	3	..	20858b	66	2426	16.2	-51 50	11.5	10.2	A3	2	..	24589b
17	1311	16.0	-53 9	10.2	10.3	A5	1	..	24589b	67	1244	16.2	-54 20	9.1	9.7	Go	3	..	24589b
18	669	16.0	-66 38	9.2	9.3	A3	4	..	15223b	68	712	16.2	-63 18	8.7	8.7	B9	8	..	18486b
19	435	16.0	-75 41	10.1	10.7	Go	2	..	20652b	69	1589	16.3	+34 24	9.8	9.9	A2	3	..	37447i
20	964	16.1	+61 5	8.8	9.6	G5	2	..	37526i	70	1490	16.3	+30 1	7.96	9.03	K2	4	2,3	38172i
21	1078	16.1	+59 10	8.5	9.3	G5	2	..	37526i	71	2069	16.3	- 2 23	9.2	9.2	A	1	..	39867b
22	1196	16.1	+55 39	9.4	10.2	G5	1	..	37526i	72	2068	16.3	- 2 30	8.7	8.7	Ao	5	E	39867b
23	1775	16.1	+20 38	5.16	6.23	K2	8	..	37472i	73	1858	16.3	- 8 57	8.1	9.1	Ko	4	..	44407b
24	1623	16.1	+ 9 5	8.3	8.6	Fo	3	0,5	37891i	74	2002	16.3	-10 42	9.3	9.3	Ao	2	..	20801b
25	1623	16.1	+ 6 8	8.7	9.7	Ko	2	..	15139b	75	1901	16.3	-11 24	9.3	9.3	B9	3	..	24606b
26	1685	16.1	- 0 12	8.68	8.68	Ao	4	..	39867b	76	1898	16.3	-11 25	9.7	9.7	Ao	1	..	24606b
27	1686	16.1	- 0 47	8.7	9.9	K5	1	..	39867b	77	1899	16.3	-11 30	9.3	9.4	A2	3	..	24606b
28	1668	16.1	- 1 42	8.5	9.0	F8	4	..	39867b	78	1846	16.3	-14 11	5.72	6.72	Ko	5	0,10	38671i
29	2066	16.1	- 2 13	9.1	10.3	K5	1	..	39867b	79	1794	16.3	-19 3	8.1	9.1	Kp	3	R	18301b
30	1853	16.1	- 3 38	8.9	9.9	Ko	3	..	44407b	80	1865	16.3	-20 18	9.5	8.9	Ao	2	..	18301b
31	1917	16.1	- 4 24	9.1	9.1	Ao	2	..	44407b	81	4362	16.3	-31 31	9.5	8.8	Ao	3	..	42915b
32	1918	16.1	- 5 3	8.40	8.38	B9	2	..	38609b	82	3707	16.3	-33 25	8.3	7.9	Ao	7	2,3-	42915b
33	2077	16.1	- 5 21	8.9	8.9	Ao	4	..	44407b	83	3530	16.3	-34 53	9.15	9.7	G5	2	..	42915b
34	1994	16.1	- 9 38	8.1	8.1	Ao	6	0,2	20801b	84	3530	16.3	-36 18	10.6	10.3	Fo	3	..	20670b
35	1843	16.1	-14 41	9.1	10.2	K2	4	..	24606b	85	3529	16.3	-36 48	9.3	9.7	A3	4	..	20670b
36	1924	16.1	-17 8	9.2	9.6	F5	1	..	15402b	86	2981	16.3	-41 22	9.5	9.7	Ao	3	..	20671b
37	1884	16.1	-21 54	7.12	8.0	G5	3	..	42935b	87	3065	16.3	-46 3	7.2	7.9	Ko	7	..	20858b
38	4312	16.1	-30 27	8.7	8.2	F8	4	..	42915b	88	2428	16.3	-51 37	11.5	10.2	B9	2	..	24589b
39	4357	16.1	-31 37	10.4	9.2	A	2	..	42915b	89	728	16.3	-65 13	9.82	10.1	G	1	..	15223b
40	3894	16.1	-32 15	9.3	8.9	B9	4	..	42915b	90	436	16.3	-75 31	9.8	10.8	Ko	1	..	20652b
41	3528	16.1	-36 20	10.3	10.9	Ko	1	..	20670b	91	1197	16.4	+55 9	9.0	9.3	F2	3	..	37526i
42	3473	16.1	-37 22	10.8	10.6	A	2	..	20670b	92	1590	16.4	+34 10	10.0	10.0	Ao	2	..	37447i
43	3320	16.1	-38 17	10.1	9.4	B5	3	..	20670b	93	1515	16.4	+33 31	8.5	8.6	A3	7	..	37447i
44	2977	16.1	-41 36	10.1	9.6	Ao	3	..	20671b	94	1557	16.4	+16 57	8.4	8.4	B9	4	..	37891i
45	1312	16.1	-53 5	9.9	10.0	A2	2	..	24589b	95	1459	16.4	+15 57	9.2	9.2	A	1	..	37891i
46	809	16.1	-59 5	7.4	7.8	A3	5	2,8	18486b	96	1644	16.4	+14 49	8.64	9.64	Ko	1	..	37891i
47	1138	16.2	+54 43	8.9	9.0	A5	3	..	37526i	97	1673	16.4	- 1 18	9.4	9.4	B9	2	..	39867b
48	1850	16.2	+40 53	8.1	9.1	Ko	4	..	37501i	98	1858	16.4	- 3 6	7.9	9.1	K5	3	..	44407b
49	1655	16.2	+22 50	8.1	9.1	Ko	2	..	37472i	99	1920	16.4	- 4 21	9.1	9.1	Ao	5	0,2	44407b
50	1457	16.2	+16 51	9.0	9.0	A	2	..	37570i	100	2064	16.4	- 6 7	9.1	9.1	Ao	3	..	44407b

THE HENRY DRAPER CATALOGUE.

57500

7<sup>h</sup> 16<sup>m</sup>.4

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1902	16.4	-11 58	9.7	10.0	F2	3	..	24606b	51	3080	16.6	-40 19	8.9	9.6	B9	3	..	20671b
2	1795	16.4	-18 24	9.2	9.2	A0	2	..	15402b	52	3067	16.6	-47 2	8.2	7.7	A3	7	..	20858b
3	5228	16.4	-25 0	9.7	8.6	B5	5	4.3	18301b	53	1144	16.6	-52 21	7.7	8.2	F5	7	..	24589b
4	4245	16.4	-29 9	8.1	8.2	A0	1	..	8905b	54	1209	16.6	-55 6	7.82	8.1	B9	7	..	12757b
5	3532	16.4	-36 26	10.3	9.4	A5	4	..	20670b	55	1187	16.6	-57 10	7.1	7.9	Go	5	..	13007b
6	3137	16.4	-42 52	9.4	9.7	K0	3	..	20671b	56	301	16.6	-77 37	10.1	10.2	A5	3	..	20652b
7	812	16.4	-62 51	8.8	9.6	G5	3	..	18486b	57	276	16.7	+76 5	10.2	10.2	A	1	..	37559i
8	252	16.5	+81 6	6.50	7.50	K0	6	..	37546i	58	1707	16.7	+42 30	8.7	8.8	A5	2	..	37501i
9	324	16.5	+74 21	7.8	7.9	A5	7	..	37559i	59	1517	16.7	+33 54	8.1	8.1	A0	8	..	37447i
10	1439	16.5	+47 47	8.6	9.8	K5	1	..	37515i	60	1697	16.7	+7 4	9.0	9.1	A2	2	..	15139b
11	1646	16.5	+41 35	7.74	7.74	A0	7	..	37501i	61	1657	16.7	+3 42	8.5	8.5	A0	5	..	39867b
12	1692	16.5	+23 19	8.5	8.6	A3	2	..	37472i	62	1781	16.7	+1 44	8.3	8.3	A0	5	0.2	39867b
13	1690	16.5	+23 9	8.6	9.2	G	3	R	37472i	63	1782	16.7	+1 10	9.0	9.3	F2	1	..	39867b
14	1511	16.5	+10 10	8.7	8.8	A5	3	..	15139b	64	2069	16.7	-7 1	9.7	10.1	F5	1	..	44407b
15	1656	16.5	+3 32	9.0	9.0	A0	5	0.3	39867b	65	1997	16.7	-9 45	9.7	9.7	A0	1	..	24606b
16	1652	16.5	+2 52	8.1	8.2	A5	6	2.4	39867b	66	2005	16.7	-10 9	9.2	9.2	B8	5	..	24606b
17	1862	16.5	-8 41	6.50	6.92	F5	5	0.8	38609i	67	1905	16.7	-11 36	10.0	11.0	K0	1	..	24606b
18	1996	16.5	-9 42	9.2	9.2	A0	4	..	24606b	68	1914	16.7	-12 28	9.5	10.5	K0	1	..	24606b
19	1909	16.5	-12 6	8.9	8.9	B8	4	..	20801b	69	1913	16.7	-13 3	9.3	10.3	K0	3	..	24606b
20	1908	16.5	-12 27	10.4	10.5	A2	2	..	24606b	70	1963	16.7	-13 53	8.9	9.0	A2	3	..	20801b
21	1961	16.5	-13 12	9.5	9.5	B8	3	..	24606b	71	1853	16.7	-14 10	8.9	9.0	A2	4	..	20801b
22	1960	16.5	-13 20	9.7	9.7	A0	3	..	24606b	72	1914	16.7	-16 9	8.7	8.8	A2	4	..	15402b
23	1849	16.5	-14 28	9.3	10.4	K2	2	..	24606b	73	1823	16.7	-22 40	6.45	6.3	B3	6	..	42935b
24	1911	16.5	-16 37	8.5	8.6	A2	7	..	15402b	74	4378	16.7	-31 59	8.3	8.3	A3	4	..	42915b
25	1833	16.5	-19 45	9.2	9.1	A3	3	..	18288b	75	3713	16.7	-33 22	8.9	8.5	F5	4	..	42915b
26	1888	16.5	-21 23	8.4	8.2	B9	7	..	18301b	76	3529	16.7	-35 6	10.8	10.3	A0	1	..	20670b
27	4208	16.5	-26 31	6.59	7.3	F0	..	5.7-	28,200	77	3527	16.7	-35 18	8.9	10.0	K0	3	..	20670b
28	4329	16.5	-31 2	8.5	8.3	A2	4	..	42915b	78	3534	16.7	-36 16	10.6	10.0	A0	3	..	20670b
29	3900	16.5	-32 55	10.3	9.4	A2	3	..	20670b	79	3482	16.7	-37 32	10.6	10.0	F0	3	..	20670b
30	3532	16.5	-34 54	8.40	8.8	A3	6	..	42915b	80	3243	16.7	-39 32	9.3	9.3	B9	4	..	20671b
31	3326	16.5	-38 12	10.1	9.6	F5	4	..	20670b	81	3114	16.7	-43 39	8.9	9.6	K0	4	..	20671b
32	2983	16.5	-41 25	8.3	8.4	A0	6	..	20671b	82	2757	16.7	-49 48	7.39	7.9	K0	9	..	24589b
33	2690	16.5	-50 22	8.9	9.1	Go	5	..	24589b	83	2691	16.7	-50 15	10.5	9.7	F5	2	..	24589b
34	155	16.5	-83 45	9.1	9.9	G5	3	..	20557b	84	1145	16.7	-52 41	9.9	10.9	K0	1	..	24589b
35	39	16.6	+87 57	8.91	9.19	F0	2	..	37793i	85	1246	16.7	-54 52	9.1	9.4	F2	4	..	24589b
36	1066	16.6	+57 25	9.4	10.0	G	1	R	37526i	86	1203	16.8	+52 54	9.0	10.0	K0	1	..	37515i
37	1646	16.6	+14 9	8.1	8.1	A0	6	..	37570i	87	1600	16.8	+35 21	8.5	9.6	K2	2	..	37447i
38	1696	16.6	+7 41	9.2	9.3	A2	2	..	15139b	88	1601	16.8	+35 14	9.4	9.8	F5	3	..	37447i
39	2080	16.6	-5 43	6.59	6.42	B3	..	2.7-	56,84	89	1518	16.8	+33 22	8.2	8.6	F5	6	..	37447i
40	2067	16.6	-6 13	9.1	9.1	A0	2	..	44407b	90	1658	16.8	+22 16	9.4	9.4	A0	2	..	38238i
41	2065	16.6	-6 42	8.7	9.7	K0	2	..	44407b	91	1658	16.8	+3 19	8.3	9.5	K5	2	..	39867b
42	1908	16.6	-7 12	8.9	10.1	K5	1	..	44407b	92	2007	16.8	-10 7	9.5	10.3	G5	1	..	24606b
43	1911	16.6	-12 45	8.9	8.9	A0	4	..	20801b	93	4223	16.8	-26 47	5.84	5.3	B3	..	0.8	28,200
44	1869	16.6	-20 28	7.02	7.3	A3	4	..	42935b	94	3530	16.8	-35 39	9.9	10.0	A5	3	..	20670b
45	5233	16.6	-24 5	10.9	9.2	A	3	..	18301b	95	3485	16.8	-38 1	10.6	10.2	A0	3	..	20670b
46	4332	16.6	-30 53	10.7	9.4	A	3	R	42915b	96	3323	16.8	-44 4	9.4	9.3	A0	3	..	20671b
47	4375	16.6	-31 28	8.5	8.8	G5	3	..	42915b	97	3099	16.8	-45 27	9.4	9.0	A5	3	..	20858b
48	3533	16.6	-34 49	9.9	9.7	A2	3	..	20670b	98	1248	16.8	-54 29	9.1	10.3	K5	2	..	24589b
49	3526	16.6	-35 41	10.3	10.0	Go	2	..	20670b	99	673	16.8	-66 50	9.5	9.8	F2	3	..	15223b
50	3327	16.6	-39 1	10.3	10.2	K2	2	..	20670b	100	1069	16.9	+57 10	9.5	10.3	G5	1	..	37526i

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

57600

7<sup>h</sup> 16<sup>m</sup>.9

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1426	16.9	+50 5	8.9	8.9	Ao	1	..	37515i	51	1635	17.1	+ 5 48	8.1	9.3	K5	2	..	15139b
2	1591	16.9	+18 14	9.0	9.0	Ao	4	..	3757oi	52	2086	17.1	- 5 23	8.1	8.1	Ao	5	..	38609i
3	1648	16.9	+14 7	8.2	9.2	Ko	3	..	3757oi	53	2085	17.1	- 5 38	9.1	9.1	Ao	3	..	44407b
4	1650	16.9	+13 21	10.4	10.4	A	1	..	3757oi	54	2009	17.1	-10 33	9.3	9.3	Ao	2	..	20801b
5	1748	16.9	+ 8 25	8.7	9.5	G5	2	..	15139b	55	1908	17.1	-11 43	10.0	10.0	Ao	3	..	24606b
6	1675	16.9	+ 4 22	8.3	8.7	F5	2	..	3758oi	56	1778	17.1	-15 17	9.1	10.1	Ko	3	..	15402b
7	1659	16.9	+ 3 12	9.0	10.1	K2	1	..	39867b	57	1780	17.1	-15 19	9.1	9.1	Ao	3	..	15402b
8	1915	16.9	+ 0 22	6.00	5.95	B8	..	1,R	56,84	58	1840	17.1	-19 33	9.1	8.6	Ao	4	..	18301b
9	2083	16.9	- 5 56	9.2	9.2	Ao	4	..	44407b	59	4386	17.1	-31 52	8.9	8.5	F5	3	..	42915b
10	1915	16.9	-12 49	9.1	10.1	Ko	4	..	24606b	60	3720	17.1	-34 0	10.3	9.5	G5	3	..	20670b
11	1798	16.9	-18 26	8.5	9.5	Ko	4	..	18288b	61	3541	17.1	-34 9	9.9	10.3	K5	2	..	20670b
12	1837	16.9	-20 2	9.38	9.1	Ao	3	..	18301b	62	3534	17.1	-35 47	10.6	10.7	G5	1	..	20670b
13	1874	16.9	-20 35	9.3	8.8	B8	3	..	18301b	63	3250	17.1	-39 59	9.40	9.9	Ko	2	..	20671b
14	5242	16.9	-25 1	10.4	9.0	A	3	..	18301b	64	3119	17.1	-43 18	8.3	7.7	Ao	8	..	20671b
15	4400	16.9	-25 43	6.10	8.0	Ma	5	0,5	20856b	65	..	17.1	-76 13	..	..	K	1	..	20652b
16	4399	16.9	-25 55	9.5	8.3	B9	4	..	12666b	66	572	17.2	+65 8	8.0	8.6	Go	4	..	37713b
17	3954	16.9	-27 57	9.0	8.4	Fo	2	..	12666b	67	1208	17.2	+56 44	7.63	8.70	K2	3	..	37526i
18	4260	16.9	-29 41	7.65	7.3	B5	4	..	8905b	68	1442	17.2	+47 10	9.2	10.0	G5	2	..	37501i
19	3717	16.9	-33 59	9.3	8.5	B9	4	..	42915b	69	1852	17.2	+40 52	5.28	6.28	Ko	9	..	37501i
20	3531	16.9	-35 47	10.6	10.6	Go	1	..	20670b	70	1598	17.2	+34 26	8.4	8.4	B9	6	..	37447i
21	3142	16.9	-42 50	11.5	10.2	Go	1	..	20671b	71	1599	17.2	+34 4	10.0	10.3	F	2	..	37447i
22	1305	16.9	-56 28	9.0	9.7	Ko	3	5,1	24589b	72	1371	17.2	+27 1	9.4	9.4	A	1	..	38172i
23	730	16.9	-67 46	4.02	4.44	F5	..	5,10	28,200	73	1661	17.2	+22 10	8.8	8.8	B8	2	..	37472i
24	441	16.9	-76 17	10.5	11.1	Go	1	..	20652b	74	1781	17.2	+20 44	8.6	8.9	Fo	3	..	37472i
25	1207	17.0	+56 46	7.7	8.2	F8	6	..	37526i	75	1649	17.2	+14 28	8.3	8.7	F5	5	..	3757oi
26	1519	17.0	+12 2	8.7	8.7	Ao	3	..	15139b	76	1652	17.2	+13 31	9.10	9.10	Ao	2	..	3757oi
27	1513	17.0	+10 27	8.3	8.3	Ao	4	..	15139b	77	1662	17.2	+ 3 11	8.5	9.5	Ko	3	5,1	39867b
28	1677	17.0	+ 4 51	8.26	9.04	G5	2	..	3758oi	78	1677	17.2	- 1 41	9.0	10.0	Ko	1	..	39867b
29	1661	17.0	+ 3 49	9.0	10.0	Ko	1	..	12755b	79	2087	17.2	- 5 56	9.1	9.6	F8	3	..	44407b
30	1660	17.0	+ 3 8	8.3	9.3	Ko	4	5,2	39867b	80	2074	17.2	- 6 27	9.1	10.1	Ko	3	..	44407b
31	1654	17.0	+ 2 20	7.7	7.7	Ao	7	2,4	39867b	81	2073	17.2	- 6 35	9.2	9.2	Ao	3	..	44407b
32	2072	17.0	- 6 29	9.1	9.1	Ao	3	..	44407b	82	1872	17.2	- 8 48	6.17	6.05	B5	7	..	38609i
33	1907	17.0	-11 39	8.7	8.7	Ao	2	..	20801b	83	2010	17.2	-10 13	9.5	9.5	B9	3	..	24606b
34	1917	17.0	-12 55	10.6	10.6	Ao	1	..	24606b	84	2012	17.2	-10 22	9.7	10.2	F8	1	..	24606b
35	1967	17.0	-13 17	9.3	10.4	K2	2	..	24606b	85	2011	17.2	-11 0	9.5	9.5	Ao	3	..	24606b
36	5320	17.0	-23 25	8.3	8.6	K2	3	..	18301b	86	1969	17.2	-13 41	9.3	9.7	F5	2	..	24606b
37	3910	17.0	-32 18	7.30	8.2	Ko	6	..	42915b	87	1858	17.2	-14 6	10.2	10.6	F5	2	..	24606b
38	3719	17.0	-33 40	9.9	10.3	K2	2	..	20670b	88	1929	17.2	-17 58	9.2	9.2	B9	3	..	18288b
39	3538	17.0	-36 45	9.5	10.0	G5	3	..	20670b	89	4357	17.2	-30 41	9.0	8.2	Fo	6	..	42915b
40	3326	17.0	-44 14	9.8	9.6	Ao	3	..	20671b	90	3912	17.2	-32 7	9.3	8.6	F8	2	..	42915b
41	3100	17.0	-45 10	8.64	9.6	Ko	1	..	20858b	91	3148	17.2	-43 0	10.5	9.7	B9	3	..	20671b
42	811	17.0	-59 33	8.2	8.5	A5	4	0,3	12757b	92	3125	17.2	-43 54	10.0	9.6	Fo	4	..	20671b
43	254	17.0	-78 49	9.7	9.8	A3	5	..	20652b	93	2875	17.2	-49 0	9.8	9.7	Go	1	..	20858b
44	286	17.1	+77 9	7.20	7.98	G5	5	..	37559i	94	1147	17.2	-52 41	10.1	10.2	A2	1	..	24589b
45	1204	17.1	+52 35	9.4	10.6	K5	1	..	37515i	95	1213	17.2	-55 26	8.6	8.5	A2	4	..	12757b
46	1205	17.1	+52 5	5.91	6.98	K2	7	..	37515i	96	1307	17.2	-56 18	9.0	10.0	Ko	1	..	24589b
47	1262	17.1	+45 56	8.0	9.2	K5	3	..	37501i	97	302	17.2	-77 35	9.7	9.6	B5	4	..	20652b
48	1747	17.1	+38 13	8.8	9.1	Fo	3	..	37447i	98	1053	17.3	+60 36	8.9	9.5	Go	3	..	37526i
49	1375	17.1	+28 54	9.0	10.0	Ko	1	..	38172i	99	1686	17.3	+43 24	8.6	9.7	K2	1	..	37501i
50	1750	17.1	+ 8 20	8.7	9.8	K2	1	..	15139b	100	1932	17.3	+39 20	8.2	8.6	F5	3	E	37501i



## THE HENRY DRAPER CATALOGUE.

57700

7<sup>h</sup> 17<sup>m</sup>.3

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
		m.	°									m.	°						
1	1604	17.3	+35 41	8.4	9.2	G5	3	..	37447i	51	2013	17.5	-10 56	9.3	10.5	K5	2	..	24606b
2	1659	17.3	+25 42	9.0	9.0	B9	2	..	38172i	52	1920	17.5	-12 26	9.2	10.4	K5	3	..	24606b
3	1593	17.3	+18 28	6.82	7.16	F2	6	..	37472i	53	1864	17.5	-14 32	8.5	9.6	K2	3	..	24606b
4	1561	17.3	+17 36	7.4	7.4	B9	6	1,8	37472i	54	1862	17.5	-14 37	8.7	8.7	Ao	6	..	24606b
5	1516	17.3	+10 2	7.82	7.88	A2	6	..	37581i	55	1841	17.5	-20 1	9.2	8.8	A	4	..	18288b
6	1703	17.3	+7 8	9.0	9.4	F5	2	E	37581i	56	1881	17.5	-20 13	8.38	8.5	B9	3	..	18301b
7	1916	17.3	+0 53	6.64	7.42	G5	4	5,8	37580i	57	5258	17.5	-24 3	7.4	8.5	Ma	4	..	18301b
8	2079	17.3	-2 48	6.30	6.72	F5	7	..	38609i	58	3972	17.5	-28 0	7.4	8.0	Ko	3	..	8905b
9	2076	17.3	-7 5	9.2	9.2	Ao	2	..	44407b	59	4396	17.5	-31 50	9.3	8.8	B9	3	..	42915b
10	2002	17.3	-10 4	10.2	10.2	Ao	1	..	24606b	60	3920	17.5	-32 44	9.9	10.2	Ko	1	..	20670b
11	1921	17.3	-16 8	9.2	10.4	K5	1	..	15402b	61	3544	17.5	-34 4	7.9	9.4	K2	3	..	42915b
12	1930	17.3	-17 40	9.7	9.7	Ao	2	..	18288b	62	3333	17.5	-38 7	10.6	10.4	G5	1	..	20670b
13	1802	17.3	-18 50	9.0	10.1	K2	2	..	18288b	63	2986	17.5	-47 14	9.6	9.3	Ao	2	..	20858b
14	1803	17.3	-18 56	10.1	10.1	Ao	3	..	18288b	64	1149	17.5	-52 23	7.9	8.5	G5	7	..	24589b
15	3535	17.3	-35 34	11.3	10.9	A3	1	..	20670b	65	1250	17.5	-54 38	9.1	9.2	Go	5	..	24589b
16	3540	17.3	-36 12	9.9	10.2	Fo	2	..	20670b	66	1217	17.5	-55 17	9.4	10.5	K2	1	..	24589b
17	3251	17.3	-39 19	10.8	10.4	Fo	1	..	20670b	67	1189	17.5	-57 52	6.91	7.0	Ao	7	0,9	18486b
18	3127	17.3	-43 16	10.9	10.2	F2	2	..	20671b	68	255	17.5	-78 32	10.3	10.3	Ao	3	..	20652b
19	1214	17.3	-55 47	7.6	8.5	K2	3	..	12757b	69	1621	17.6	+36 30	6.97	7.31	F2	9	..	37447i
20	819	17.3	-60 25	8.4	9.1	Fo	3	..	18486b	70	1653a	17.6	+13 17	var.	var.	Md	..	R	56,200
21	698	17.3	-65 2	9.3	10.1	G5	1	..	15223b	71	1664	17.6	+3 54	9.4	9.4	Ao	2	..	12755b
22	675	17.3	-66 24	9.6	10.2	G	1	..	15223b	72	2077	17.6	-6 41	9.2	9.2	Ao	2	..	44407b
23	582	17.3	-72 34	8.1	8.4	Fo	5	0,6	15168b	73	1917	17.6	-7 52	9.5	9.5	Ao	2	..	44407b
24	254	17.4	+78 55	7.40	7.96	Go	5	0,5	38331i	74	2005	17.6	-10 1	9.31	10.31	Ko	3	..	24606b
25	1622	17.4	+44 5	9.2	10.0	G5	1	..	37501i	75	2015	17.6	-10 38	9.1	8.9	B	2	..	20801b
26	1519	17.4	+33 51	8.0	9.1	K2	4	..	37447i	76	..	17.6	-11 33	..	..	Ao	1	..	24606b
27	1660	17.4	+25 15	5.08	5.86	G5	9	R	38172i	77	..	17.6	-12 25	..	..	Ao	2	..	24606b
28	1554	17.4	+15 33	6.71	7.49	G5	6	0,5	37570i	78	1783	17.6	-15 31	9.2	9.3	A3	2	..	15402b
29	1705	17.4	+7 41	8.3	9.3	Ko	4	0,4 R	15139b	79	1935	17.6	-17 38	8.5	8.6	A3	6	..	18288b
30	1633	17.4	+6 7	8.4	9.4	Ko	3	..	15139b	80	1933	17.6	-17 51	10.2	10.2	B9	3	..	18288b
31	1680	17.4	+4 37	9.0	9.0	Ao	3	..	12755b	81	1805	17.6	-18 17	9.2	10.2	Ko	2	..	18288b
32	1784	17.4	+1 26	8.7	8.7	Ao	3	0,1	39867b	82	4246	17.6	-26 47	9.0	8.9	Ao	3	..	12666b
33	1918	17.4	-0 4	6.68	6.66	B9	8	0,8	39867b	83	4370	17.6	-30 19	9.0	8.0	Ao	6	..	42915b
34	1915	17.4	-7 58	9.7	9.7	Ao	1	..	44407b	84	3537	17.6	-35 10	11.0	10.7	A5	1	..	20670b
35	1909	17.4	-11 17	9.2	10.4	K5	2	..	24606b	85	3538	17.6	-35 19	7.9	8.0	Ao	7	..	42915b
36	1861	17.4	-14 54	8.6	8.7	A5	4	..	24606b	86	3334	17.6	-38 4	10.8	10.2	Fo	2	..	20670b
37	1879	17.4	-20 21	8.9	8.9	Go	2	..	18301b	87	3337	17.6	-45 2	8.24	8.7	Ko	3	..	20858b
38	3332	17.4	-38 11	9.7	9.4	A5	4	..	20670b	88	1151	17.6	-52 31	9.7	10.0	Fo	2	..	24589b
39	3331	17.4	-38 50	9.9	10.2	Ko	2	..	20670b	89	1621	17.7	+49 51	7.92	8.92	Ko	1	..	37515i
40	3335	17.4	-44 25	9.1	9.0	B9	4	..	20671b	90	1430	17.7	+45 3	7.82	8.82	Ko	5	..	37501i
41	1148	17.4	-52 37	9.6	10.6	Ko	1	..	24589b	91	1377	17.7	+27 59	7.9	9.0	K2	3	..	38172i
42	502	17.5	+66 32	6.29	6.27	B9	10	..	37713i	92	1650	17.7	+14 7	8.5	8.8	Fo	5	..	37570i
43	923	17.5	+62 14	8.9	9.9	Ko	3	..	37526i	93	1708	17.7	+7 43	8.7	8.7	B9	5	..	15139b
44	1698	17.5	+23 9	6.02	6.02	Ao	9	..	37472i	94	..	17.7	+7 36	..	..	F5	2	..	15139b
45	1784	17.5	+20 55	8.8	8.9	A5	2	..	37472i	95	1709	17.7	+7 9	8.3	8.3	B9	4	..	37581i
46	1637	17.5	+6 34	7.8	8.3	F8	4	0,4	15139b	96	2078	17.7	-6 34	9.1	9.6	F8	2	..	44407b
47	1659	17.5	+2 54	9.7	9.8	A2	1	..	39867b	97	1911	17.7	-11 49	8.6	8.6	Ao	3	..	20801b
48	1924	17.5	-5 2	9.3	9.4	A3	2	..	44407b	98	1922	17.7	-12 17	10.0	10.1	A2	3	..	24606b
49	2089	17.5	-5 48	5.83	6.11	Fo	..	0,8	56,84	99	..	17.7	-12 45	..	..	Ao	1	..	24606b
50	1916	17.5	-7 11	9.5	9.5	Ao	1	..	44407b	100	1936	17.7	-17 35	9.5	9.5	A	1	..	18288b



## ANNALS OF HARVARD COLLEGE OBSERVATORY.

57800

7<sup>h</sup> 17<sup>m</sup>.7

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	5336	17.7	-23 9	10.2	8.8	Ao	3	..	18301b	51	3339	17.9	-45 2	9.24	9.9	Fo	3	..	20671b
2	5335	17.7	-23 37	9.3	7.9	B9	5	..	18301b	52	1153	17.9	-52 8	6.36	6.5	F2	5	R	8951b
3	4372	17.7	-30 53	9.3	8.2	A2	5	..	42915b	53	1315	17.9	-52 8	6.99	9.1	Ko	8	..	24589b
4	3539	17.7	-35 35	9.3	9.5	F5	3	..	20670b	54	157	17.9	-83 43	9.9	10.0	A2	2	..	20557b
5	2999	17.7	-41 14	10.6	9.9	F2	2	..	20671b	55	1199	18.0	+55 43	8.2	8.2	Ao	6	..	37526i
6	2770	17.7	-49 13	8.2	8.5	A5	8	..	24589b	56	1520	18.0	+33 14	8.6	9.6	Ko	2	..	37447i
7	1191	17.7	-57 16	6.8	7.9	Ao	9	..	13007b	57	1378	18.0	+28 2	9.0	10.0	K	1	..	38172i
8	717	17.7	-63 12	7.6	7.6	B9	9	..	18486b	58	1661	18.0	+2 22	8.7	8.7	Ao	4	0,2	39867b
9	718	17.7	-63 53	9.6	9.6	B9	4	..	18486b	59	1920	18.0	-0 1	8.48	8.46	B9	4	..	39867b
10	304	17.8	+75 0	7.82	8.60	G5	6	..	37559i	60	1871	18.0	-3 42	7.9	8.3	F5	4	..	38609i
11	487	17.8	+67 51	8.6	9.6	Ko	2	..	37713i	61	2091	18.0	-5 45	9.2	9.2	Ao	2	..	44407b
12	1055	17.8	+60 48	8.9	9.9	Ko	2	..	37526i	62	2011	18.0	-9 26	7.7	8.2	F8	6	0,2	20801b
13	1054	17.8	+60 46	8.8	9.6	G5	3	..	37526i	63	1807	18.0	-19 1	8.6	8.7	A5	6	..	18288b
14	1712	17.8	+42 10	7.8	9.0	K5	2	..	37501i	64	1846	18.0	-19 47	9.1	9.1	Ao	3	0,2	18288b
15	1752	17.8	+38 1	8.7	8.8	A5	2	..	37447i	65	5345	18.0	-24 1	10.0	8.5	Ao	5	..	18301b
16	1926	17.8	-5 2	8.00	8.00	Ao	2	..	38609i	66	4410	18.0	-31 31	9.7	8.8	Ao	2	..	42915b
17	2007	17.8	-10 3	8.86	10.21	Ma	2	..	24606b	67	3549	18.0	-36 15	9.5	8.9	B9	4	..	42915b
18	1923	17.8	-12 7	10.0	10.6	G	1	..	24606b	68	3499	18.0	-37 15	10.8	10.9	Ko	2	..	20670b
19	1786	17.8	-15 22	8.3	8.3	B9	6	..	15402b	69	3501	18.0	-37 37	10.3	10.2	Ao	3	..	20670b
20	1923	17.8	-16 7	7.08	8.15	K2	8	2,1	18288b	70	3498	18.0	-37 43	11.7	10.9	A	1	..	20670b
21	1806	17.8	-18 50	4.87	4.82	B8	..	0,2-	56,84	71	3004	18.0	-41 17	9.9	9.9	F5	2	..	20671b
22	1885	17.8	-20 5	10.0	9.4	Ao	1	..	18288b	72	2775	18.0	-49 38	9.4	9.1	F5	5	..	24589b
23	5338	17.8	-23 21	9.7	8.5	B9	5	..	18301b	73	2774	18.0	-49 58	10.0	10.0	Fo	2	..	24589b
24	5339	17.8	-23 35	10.7	8.8	B9	2	..	18301b	74	1192	18.0	-57 36	8.2	8.3	A3	4	..	13007b
25	3922	17.8	-32 50	10.3	10.2	Go	1	..	20670b	75	442	18.0	-76 55	10.2	10.8	Go	1	..	20652b
26	3728	17.8	-33 27	10.8	8.9	Ao	3	..	42915b	76	67	18.0	-88 16	9.2	10.2	Ko	3	..	15145b
27	3548	17.8	-34 40	10.8	10.3	Ao	2	..	20670b	77	503	18.1	+66 42	7.52	7.66	A5	5	3,6	37713i
28	3540	17.8	-35 7	9.45	9.7	G5	3	..	20670b	78	1072	18.1	+56 56	9.0	10.0	K	1	..	37526i
29	3094	17.8	-41 0	7.8	8.8	Ko	6	..	20671b	79	1443	18.1	+47 1	7.8	8.8	Ko	3	..	37501i
30	3157	17.8	-42 37	8.8	8.4	A2	6	..	20671b	80	1466	18.1	+16 52	7.8	8.8	Ko	4	0,4	37472i
31	3158	17.8	-42 50	10.9	10.2	F5	2	..	20671b	81	1643	18.1	+5 58	9.4	9.4	Ao	4	..	15139b
32	3133	17.8	-43 38	9.0	8.5	A5	6	R	20671b	82	1662	18.1	+2 36	8.5	9.3	G5	1	..	39867b
33	3133	17.8	-43 38	9.0	8.5	K	6	R	20671b	83	1873	18.1	-4 2	9.3	..	N	1	R	44407b
34	2879	17.8	-48 46	10.0	9.4	B9	2	..	20858b	84	1922	18.1	-7 46	9.3	9.3	B9	3	..	44407b
35	1310	17.8	-56 16	10.0	10.0	A	2	..	24589b	85	2018	18.1	-10 17	9.2	10.2	Ko	2	..	24606b
36	1601	17.9	+34 25	8.0	8.8	G5	5	..	37447i	86	1912	18.1	-12 3	10.0	11.2	K5	1	..	24606b
37	1559	17.9	+15 30	8.3	9.1	G5	3	..	37891i	87	1924	18.1	-12 43	9.2	10.6	Ma	..	R	M
38	1641	17.9	+5 34	8.1	9.2	K2	5	2,4	15139b	88	1808	18.1	-18 40	10.0	10.3	Fo	1	..	18288b
39	1666	17.9	+3 29	9.4	10.2	G5	2	..	12755b	89	1889	18.1	-20 19	7.35	8.6	Mb	4	..	18301b
40	1875	17.9	-8 51	8.3	8.6	Fo	4	..	20801b	90	3545	18.1	-35 15	8.0	9.2	Ko	4	..	42915b
41	2009	17.9	-9 43	10.4	10.4	Ao	2	..	24606b	91	3550	18.1	-36 19	7.9	8.2	B8	8	..	42915b
42	2008	17.9	-9 52	10.1	10.1	Ao	1	..	24606b	92	3341	18.1	-38 7	9.9	9.6	B9	4	..	20670b
43	1972	17.9	-14 1	9.2	10.0	G5	5	..	24606b	93	3097	18.1	-40 8	9.5	10.5	K5	1	..	20670b
44	1937	17.9	-17 37	8.1	8.4	F2	7	..	18288b	94	3007	18.1	-41 46	8.9	9.0	A	2	R	20858b
45	1886	17.9	-20 5	10.0	10.3	Ao	2	..	18288b	95	3006	18.1	-41 48	7.3	7.8	Ao	5	..	20858b
46	5343	17.9	-23 52	10.2	8.5	Ao	4	..	18301b	96	2884	18.1	-48 20	8.4	7.6	B9	7	..	20858b
47	3733	17.9	-33 49	7.8	8.3	Ko	5	..	42915b	97	2443	18.1	-51 39	10.2	10.6	A	1	..	24589b
48	3544	17.9	-35 36	10.8	10.3	Ao	1	..	20670b	98	103	18.1	-85 15	9.3	10.5	K5	1	..	22238b
49	3337	17.9	-39 2	10.6	10.5	F5	2	..	20670b	99	1589	18.2	+21 39	8.0	8.0	B9	5	..	37472i
50	3160	17.9	-42 8	10.2	9.7	Ao	2	..	20671b	100									

## THE HENRY DRAPER CATALOGUE.

57900

7<sup>h</sup> 18<sup>m</sup>.2

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1655	18.2	+13 10	8.30	9.08	G5	3	..	3757oi	51	1713	18.4	+42 53	8.6	8.7	A5	3	..	3750ri
2	1921	18.2	+ 0 45	7.6	7.7	A2	6	0.3	39867b	52	1522	18.4	+33 39	9.5	10.3	G5	2	..	37447i
3	2083	18.2	- 6 54	9.1	10.2	K2	1	..	44407b	53	1704	18.4	+23 7	8.6	9.0	F5	2	..	37472i
4	2019	18.2	-10 21	9.0	9.0	Ao	5	..	24606b	54	1526	18.4	+12 16	8.2	8.7	F8	2	..	3789ri
5	1913	18.2	-11 55	9.5	9.5	Ao	2	..	24606b	55	1711	18.4	+ 7 8	8.3	8.4	A2	7	..	3758ri
6	1925	18.2	-12 36	9.3	9.3	B9	5	..	24606b	56	1927	18.4	- 4 14	8.9	9.0	A2	1	..	38609i
7	1941	18.2	-17 26	8.3	8.2	B5	7	..	18288b	57	2092	18.4	- 5 27	8.9	8.9	Ao	1	..	38609i
8	1940	18.2	-17 31	10.0	10.0	Ao	2	..	18288b	58	2021	18.4	-10 54	8.7	9.8	K2	5	..	24606b
9	1809	18.2	-18 50	9.1	9.1	B8	6	..	18288b	59	1976	18.4	-13 47	9.1	9.6	F8	5	..	24606b
10	1837	18.2	-22 50	9.2	8.8	B5	4	..	18301b	60	1942	18.4	-17 38	8.7	8.8	A5	6	..	18288b
11	5279	18.2	-24 43	7.40	8.9	K2	3	..	42935b	61	5285	18.4	-24 55	10.7	9.2	B9	2	..	18301b
12	4414	18.2	-32 0	9.3	8.5	Ao	5	..	42915b	62	4420	18.4	-31 51	7.9	9.2	K2	2	..	42915b
13	3737	18.2	-33 34	9.9	10.2	Ko	2	..	2067ob	63	3937	18.4	-32 25	9.9	8.9	B9	3	..	42915b
14	3553	18.2	-34 10	10.6	9.5	A2	4	..	2067ob	64	3504	18.4	-37 18	9.2	9.2	B9	5	..	2067ob
15	3552	18.2	-34 23	9.2	8.9	F8	5	..	42915b	65	3141	18.4	-43 16	10.0	9.4	A2	4	..	20671b
16	3549	18.2	-35 7	9.40	9.4	F5	2	..	42915b	66	3117	18.4	-45 19	8.8	8.4	Ao	7	..	20858b
17	2445	18.2	-51 54	5.50	5.48	B9	..	0.8	56,123	67	2707	18.4	-50 37	8.8	10.0	K5	2	..	24589b
18	2446	18.2	-52 1	7.5	7.1	Ao	3	..	8951b	68	2708	18.4	-50 40	7.3	7.4	B8	3	..	8951b
19	821	18.2	-60 58	7.0	8.2	Ko	7	..	18486b	69	1313	18.4	-56 7	6.72	7.4	Ao	10	..	12757b
20	557	18.2	-71 34	7.8	8.2	F5	10	..	15168b	70	740	18.4	-65 39	10.0	10.1	A2	2	..	15223b
21	440	18.2	-73 54	10.3	10.4	A3	2	..	20652b	71	245	18.4	-79 49	8.7	8.8	A2	8	..	20652b
22	443	18.2	-76 46	10.0	10.8	G5	2	..	20652b	72	289	18.5	+77 16	9.0	9.8	G5	2	..	37559i
23	..	18.2	-76 52	..	..	A3	1	..	20652b	73	488	18.5	+67 4	8.6	9.7	K2	2	..	37713i
24	925	18.3	+62 26	8.6	9.4	G5	5	..	37526i	74	710	18.5	+63 12	8.6	9.6	Ko	2	..	37713i
25	1079	18.3	+59 22	7.8	8.9	K2	3	..	37526i	75	1603	18.5	+34 49	8.92	9.48	Go	3	..	37447i
26	1536	18.3	+32 47	9.1	9.5	F5	6	..	37447i	76	1523	18.5	+33 54	8.5	9.3	G5	5	..	37447i
27	1374	18.3	+27 50	5.71	5.99	Fo	9	..	38172i	77	1376	18.5	+27 33	8.8	8.8	Ao	2	..	38172i
28	1561	18.3	+15 22	8.4	8.4	Ao	2	..	3757oi	78	1717	18.5	+19 6	8.3	9.5	K5	3	..	3757oi
29	1653	18.3	+14 1	8.7	8.7	Ao	2	..	3757oi	79	1574	18.5	+11 6	7.4	7.5	A2	5	0.6	3897ri
30	1521	18.3	+10 54	7.9	8.0	A3	4	..	3789ri	80	1644	18.5	+ 5 9	8.3	9.3	Ko	2	..	12755b
31	1752	18.3	+ 8 45	9.0	9.5	F8	3	..	15139b	81	2084	18.5	- 6 27	8.9	8.9	Ao	1	..	38609i
32	1644	18.3	+ 6 53	8.5	9.7	K5	1	..	15139b	82	2018	18.5	- 9 26	8.7	8.8	A2	3	..	20801b
33	1642	18.3	+ 5 4	8.66	8.66	Ao	2	..	3758oi	83	2019	18.5	- 9 37	8.7	9.9	K5	3	..	24606b
34	2014	18.3	- 9 50	8.7	8.7	Ao	4	..	20801b	84	2020	18.5	- 9 52	7.9	8.4	F8	5	..	20801b
35	1915	18.3	-11 45	10.0	11.2	K5	1	..	24606b	85	2021	18.5	-10 4	8.56	8.56	Ao	3	..	20801b
36	1927	18.3	-12 20	8.7	9.7	Ko	4	..	24606b	86	1917	18.5	-11 30	9.7	10.9	K5	1	..	24606b
37	1926	18.3	-12 22	9.7	9.8	A2	1	..	24606b	87	..	18.5	-11 42	..	..	Ao	2	..	24606b
38	1870	18.3	-14 48	10.2	10.2	Ao	2	..	24606b	88	1929	18.5	-12 24	9.3	9.3	Ao	4	..	24606b
39	1928	18.3	-16 32	7.7	8.7	Ko	8	5.2	18288b	89	1905	18.5	-21 18	7.9	8.8	Ko	5	..	18301b
40	1926	18.3	-16 34	9.5	9.6	A2	2	..	18288b	90	4268	18.5	-26 57	7.9	8.6	Ko	2	..	12666b
41	1892	18.3	-21 0	8.9	9.1	G5	2	..	18288b	91	3935	18.5	-32 4	10.3	9.4	A	2	..	42915b
42	1838	18.3	-22 57	9.1	8.9	Ao	4	..	18301b	92	3743	18.5	-33 11	8.3	9.2	G5	2	..	42915b
43	4416	18.3	-31 15	10.9	8.8	A2	3	..	42915b	93	3741	18.5	-33 56	10.8	10.2	Go	2	..	2067ob
44	4418	18.3	-31 50	10.0	8.9	A	2	..	42915b	94	3557	18.5	-36 20	7.9	8.5	B8	8	..	42915b
45	3934	18.3	-32 24	6.96	7.6	Ao	7	0.3	8905b	95	3506	18.5	-37 7	9.9	10.2	F8	3	..	2067ob
46	3554	18.3	-36 27	8.6	8.2	B8	7	..	42915b	96	2449	18.5	-51 6	11.5	10.3	A2	2	..	24589b
47	3343	18.3	-38 53	9.7	9.0	Ao	4	..	20671b	97	2450	18.5	-51 41	9.0	10.0	Ko	4	..	24589b
48	3348	18.3	-45 0	9.04	10.1	K2	1	..	20671b	98	1318	18.5	-54 2	9.8	10.9	K2	1	..	24589b
49	2447	18.3	-51 13	7.0	7.1	A2	4	..	8951b	99	704	18.5	-65 2	9.69	10.2	Ko	1	..	15223b
50	1522	18.4	+48 45	7.7	7.7	B9	7	..	37515i	100	303	18.5	-77 23	9.3	10.5	K5	2	..	20652b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

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7<sup>h</sup> 18<sup>m</sup>.6

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	489	18.6	+67 38	9.2	9.6	F5	3	..	37713i	51	1758	18.8	+ 8 5	8.3	9.3	Ko	2	..	37581i
2	1074	18.6	+57 21	8.8	8.9	A2	5	..	37526i	52	1664	18.8	+ 2 11	7.7	7.9	A2	7	0,7-	12755b
3	1654	18.6	+14 40	9.4	9.4	Ao	3	..	37891i	53	1932	18.8	-12 17	9.5	9.5	Ao	3	..	24606b
4	1929	18.6	+ 0 12	8.7	9.3	Go	2	..	39867b	54	1934	18.8	-12 24	9.2	9.2	A	3	..	24606b
5	1930	18.6	-12 23	9.5	10.6	K2	1	..	24606b	55	1933	18.8	-12 29	9.0	9.0	B8	5	..	24606b
6	1931	18.6	-16 59	9.3	9.4	A2	3	..	18288b	56	1979	18.8	-13 10	7.9	7.9	Ao	5	..	20801b
7	1894	18.6	-20 33	9.3	9.1	G5	3	..	18288b	57	1948	18.8	-17 29	9.3	10.4	K2	1	..	18288b
8	5362	18.6	-23 20	10.2	8.8	Ao	4	..	18301b	58	..	18.8	-19 5	..	..	A2	1	..	18288b
9	5360	18.6	-23 41	10.0	9.1	Ko	2	..	18301b	59	1852	18.8	-19 38	9.5	9.4	A2	2	..	18288b
10	5289	18.6	-24 59	9.3	8.4	B3	6	..	18301b	60	1853	18.8	-19 47	10.2	9.4	Ao	2	..	18288b
11	4439	18.6	-25 49	6.98	6.9	Bip	5	R	42935b	61	4441	18.8	-25 35	7.5	8.9	Ma	3	..	18301b
12	3557	18.6	-35 0	9.25	9.4	Ao	3	..	42915b	62	4429	18.8	-31 4	8.0	8.8	Ko	3	..	42915b
13	3509	18.6	-37 32	9.5	9.7	A2	4	..	20670b	63	4430	18.8	-31 51	6.64	6.8	B5	8	0,8R	7406b
14	3508	18.6	-37 45	8.9	9.5	F8	4	..	20670b	64	3268	18.8	-39 51	8.9	9.6	Go	3	..	20671b
15	3344	18.6	-38 45	7.9	8.1	F8	7	..	20671b	65	3016	18.8	-41 36	10.3	9.9	Go	2	..	20671b
16	3093	18.6	-46 12	9.1	9.9	Ko	3	..	20671b	66	3356	18.8	-44 59	9.44	10.1	Ko	1	..	20671b
17	2890	18.6	-48 20	7.6	7.1	A	3	..	20858b	67	2452	18.8	-51 8	9.8	10.2	Go	2	..	24589b
18	2891	18.6	-48 21	8.6	7.9	A	5	..	20858b	68	1199	18.8	-57 7	9.2	9.8	Go	1	..	13007b
19	2709	18.6	-50 23	9.4	8.8	A2	6	..	24589b	69	1198	18.8	-57 18	9.0	9.7	G5	1	..	13007b
20	1319	18.6	-53 35	8.5	9.4	Go	5	..	24589b	70	305	18.9	+75 31	7.97	8.03	A2	7	..	37559i
21	1254	18.6	-54 50	9.5	10.3	G5	1	..	24589b	71	1795	18.9	+20 12	7.60	7.60	Ao	6	..	37472i
22	1756	18.7	+ 8 21	8.3	9.3	Ko	2	..	15139b	72	1525	18.9	+10 26	6.94	7.72	G5	6	..	37581i
23	1645	18.7	+ 6 35	8.3	8.3	B9	3	..	37581i	73	1712	18.9	+ 7 29	8.3	8.4	A2	5	..	37581i
24	1684	18.7	+ 4 46	8.80	9.36	Go	3	..	12755b	74	1930	18.9	- 5 5	8.00	8.78	G5	4	..	44407b
25	1691	18.7	- 1 39	9.0	9.0	Ao	4	..	12772b	75	1935	18.9	-12 43	10.4	10.4	Ao	2	..	24606b
26	1692	18.7	- 1 53	9.0	9.3	Fo	2	..	12772b	76	1980	18.9	-13 7	9.1	9.4	Fo	4	..	24606b
27	1929	18.7	- 5 0	9.7	9.7	A	2	..	44407b	77	..	18.9	-13 21	..	..	Ko	1	..	24606b
28	2095	18.7	- 5 16	8.7	8.7	Ao	2	..	38609i	78	1798	18.9	-15 31	9.0	9.0	Ao	4	0,3	18288b
29	2022	18.7	- 9 37	8.4	8.7	Fo	3	..	20801b	79	1933	18.9	-16 23	8.7	8.7	Ao	5	..	18288b
30	2023	18.7	-10 21	9.0	9.0	Ao	3	..	20801b	80	1814	18.9	-18 18	9.5	9.5	B9	3	..	18288b
31	1977	18.7	-13 30	9.1	10.1	Ko	3	..	24606b	81	..	18.9	-18 45	..	..	A5	2	..	18288b
32	1872	18.7	-14 41	8.5	9.0	F8	6	..	24606b	82	1846	18.9	-22 7	8.9	8.5	B9	4	..	18301b
33	1794	18.7	-15 51	9.5	9.5	Ao	1	..	15402b	83	3746	18.9	-33 54	9.5	9.5	Ko	4	..	20670b
34	1947	18.7	-17 34	7.7	8.7	Ko	8	..	18288b	84	3561	18.9	-34 34	8.9	9.4	A2	3	..	42915b
35	5363	18.7	-23 24	8.9	8.8	Ko	4	..	18301b	85	3560	18.9	-34 53	9.3	9.4	F5	2	..	42915b
36	4271	18.7	-26 10	8.7	8.1	Ao	4	..	20856b	86	3563	18.9	-37 1	9.9	9.5	Fo	5	..	20670b
37	4250	18.7	-28 24	8.0	8.4	K5	3	..	20856b	87	3347	18.9	-38 41	8.9	9.0	Go	4	..	20671b
38	3551	18.7	-35 44	7.5	7.4	F8	8	..	42915b	88	3358	18.9	-45 0	11.5	10.1	A2	2	..	20671b
39	3266	18.7	-39 17	8.4	8.7	Ao	7	..	20671b	89	2784	18.9	-49 13	7.8	8.8	Ko	7	..	24589b
40	3013	18.7	-41 38	9.3	10.2	K	1	..	20671b	90	1323	18.9	-53 26	8.5	9.1	F8	5	..	24589b
41	3122	18.7	-45 4	11.5	10.1	A5	3	..	20671b	91	1321	18.9	-53 42	8.6	8.8	Ao	7	..	24589b
42	2711	18.7	-51 2	10.2	9.7	A2	4	..	24589b	92	899	18.9	-58 29	7.3	7.8	Ao	5	1,7	18486b
43	1220	18.7	-55 12	9.17	9.4	F5	3	..	24589b	93	1715	19.0	+42 21	7.6	7.9	F2	5	..	37501i
44	897	18.7	-58 59	9.0	9.1	A3	2	..	18486b	94	1714	19.0	+41 57	8.0	8.1	A5	3	..	37501i
45	559	18.7	-71 9	9.7	10.7	Ko	2	..	15168b	95	1603	19.0	+18 16	9.0	9.1	A2	3	3,2	37570i
46	437	18.7	-75 41	7.7	8.1	F5	8	..	20652b	96	1634	19.0	+ 9 21	9.4	9.9	F8	2	..	15139b
47	490	18.8	+67 15	9.2	10.2	K	1	..	37713i	97	1646	19.0	+ 5 59	9.0	9.0	Ao	4	..	15139b
48	1605	18.8	+34 10	9.5	10.5	Ko	1	..	37447i	98	1878	19.0	- 3 47	7.05	8.05	Ko	2	..	38609i
49	1468	18.8	+16 8	9.0	10.0	Ko	1	..	38971i	99	2026	19.0	-10 45	9.0	10.0	Ko	2	..	24606b
50	1564	18.8	+15 43	6.37	6.20	B3	8	0,10	37472i	100	1936	19.0	-12 57	9.7	11.1	Ma	1	..	24606b

THE HENRY DRAPER CATALOGUE.

58100

7<sup>h</sup> 19<sup>m</sup>.0

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1874	19.0	-14 34	9.5	10.7	K5	1	..	24606b	51	1938	19.2	-16 25	10.0	10.0	Ao	2	..	18288b
2	1815	19.0	-18 9	8.9	9.3	F5	4	..	18288b	52	1817	19.2	-18 43	8.5	8.5	Ao	7	..	18288b
3	1909	19.0	-21 12	9.3	8.8	B9	4	..	18301b	53	1901	19.2	-20 30	8.7	8.9	Ao	3	..	18301b
4	5378	19.0	-23 58	9.0	8.8	G5	3	..	18301b	54	4013	19.2	-27 28	9.0	8.4	A3	2	..	12666b
5	4259	19.0	-28 53	9.7	8.7	A	2	E	20856b	55	4437	19.2	-31 44	5.43	5.7	B5	..	2, R	56, 123
6	3944	19.0	-32 36	9.3	8.8	A2	3	..	42915b	56	3571	19.2	-36 34	9.3	10.3	Ko	3	..	20670b
7	3748	19.0	-33 16	8.9	8.3	Ao	4	..	42915b	57	3349	19.2	-38 56	8.66	9.6	Ko	2	..	20671b
8	3562	19.0	-34 45	10.1	10.0	Go	3	..	20670b	58	3019	19.2	-41 23	11.0	10.2	A	2	R	20671b
9	3565	19.0	-36 33	9.3	9.4	Fo	5	0,3	20670b	59	3365	19.2	-44 33	9.4	9.9	Ko	2	..	20671b
10	3564	19.0	-37 3	11.7	10.2	A5	2	..	20670b	60	444	19.2	-76 51	9.0	10.0	Ko	6	..	20652b
11	3269	19.0	-39 5	8.6	9.6	Ko	3	..	20671b	61	1525	19.3	+33 46	9.0	9.6	Go	4	..	37447i
12	2897	19.0	-48 8	8.5	7.9	B5	6	..	20858b	62	1720	19.3	+19 12	7.6	8.6	Ko	6	5,3	3757oi
13	2896	19.0	-48 34	9.6	9.1	Fo	3	..	20858b	63	..	19.3	+ 2 23	..	..	Ao	2	2,1	12755b
14	2453	19.0	-51 19	10.9	10.3	Ao	2	..	24589b	64	1793	19.3	+ 1 33	8.8	8.9	A5	3	..	39867b
15	1255	19.0	-54 25	9.5	9.8	F2	3	..	24589b	65	1933	19.3	+ 0 47	8.99	9.27	Fo	3	..	39867b
16	1315	19.0	-56 36	7.3	7.8	B9	7	..	12757b	66	2028	19.3	-10 17	9.5	10.5	Ko	1	..	24606b
17	256	19.0	-78 9	9.7	10.3	Go	2	..	20652b	67	1919	19.3	-11 57	10.4	10.4	Ao	1	..	24606b
18	632	19.1	+64 47	8.80	8.94	A5	2	..	37713i	68	1940	19.3	-12 57	10.0	10.0	Ao	5	..	24606b
19	1144	19.1	+53 25	8.5	9.0	F8	2	..	37515i	69	..	19.3	-14 16	..	..	A2	3	..	24606b
20	1609	19.1	+35 32	8.7	9.1	F5	4	..	37447i	70	1799	19.3	-15 40	7.8	9.0	K5	6	3,4	18288b
21	1648	19.1	+ 6 21	7.7	8.5	G5	3	..	37581i	71	1954	19.3	-17 32	9.2	10.3	K2	2	..	18288b
22	1670	19.1	+ 3 22	7.7	8.7	Ko	6	0,4	39867b	72	1857	19.3	-19 22	8.9	8.3	B9	5	..	18301b
23	2090	19.1	- 6 51	8.9	9.5	Go	2	..	44407b	73	1913	19.3	-21 13	9.5	9.1	Ao	3	..	18301b
24	..	19.1	-11 37	..	..	Ao	1	..	24606b	74	1848	19.3	-22 19	9.1	8.9	Ko	3	..	18301b
25	1983	19.1	-13 15	9.5	10.5	Ko	1	..	24606b	75	1849	19.3	-22 43	9.1	8.5	F8	4	..	18301b
26	1984	19.1	-13 44	9.3	10.3	Ko	3	..	24606b	76	5382	19.3	-23 44	9.0	8.5	A2	5	..	18301b
27	1981	19.1	-13 54	7.7	7.7	B8	3	..	38671i	77	5310	19.3	-24 46	8.33	8.9	K2	4	..	18301b
28	1876	19.1	-15 1	8.58	8.58	Ao	5	..	24606b	78	3751	19.3	-33 43	9.3	9.2	Ko	5	..	20670b
29	1936	19.1	-16 33	9.7	10.5	G5	1	..	18288b	79	3750	19.3	-33 51	11.3	9.4	Ko	3	..	20670b
30	1953	19.1	-17 27	10.0	10.1	A2	1	..	18288b	80	3572	19.3	-36 53	8.6	8.2	Fo	5	..	42915b
31	1854	19.1	-20 2	7.33	7.0	B2	6	..	20767b	81	3277	19.3	-39 47	9.9	9.4	Ao	5	..	20671b
32	1912	19.1	-21 19	8.1	8.5	A2	6	..	18301b	82	584	19.3	-72 56	9.9	9.9	Ao	3	E	20652b
33	1847	19.1	-22 29	9.2	8.8	B9	4	..	18301b	83	633	19.4	+64 3	7.7	8.1	F5	6	0,7	37713i
34	4300	19.1	-29 34	7.7	8.2	Ko	5	..	42915b	84	926	19.4	+62 5	7.46	8.46	Ko	7	..	37526i
35	3556	19.1	-35 19	10.6	10.9	Ao	1	..	20670b	85	1757	19.4	+38 1	8.0	9.0	Ko	3	..	37447i
36	3568	19.1	-36 52	9.3	9.4	Ko	2	..	42915b	86	1648	19.4	+24 53	9.46	9.46	A	1	..	38172i
37	3155	19.1	-43 32	9.0	9.4	Ko	4	..	20671b	87	1578	19.4	+11 52	5.34	5.40	A2	9	0,10	38971i
38	3130	19.1	-45 42	9.0	9.3	Ko	4	..	20671b	88	1652	19.4	+ 6 51	9.4	9.4	Ao	1	..	15139b
39	3102	19.1	-46 50	8.8	9.0	G5	4	..	20858b	89	1666	19.4	+ 2 6	9.0	9.4	F5	2	..	39867b
40	680	19.1	-67 0	8.4	9.8	Ma	4	..	15223b	90	1941	19.4	-12 13	9.7	10.7	Ko	1	..	24606b
41	715	19.1	-69 9	8.2	9.2	Ko	4	..	15223b	91	1942	19.4	-12 34	9.1	9.4	Fo	3	..	20801b
42	1623	19.2	+49 25	4.45	4.45	Ao	..	0,10	56,84	92	1955	19.4	-17 13	6.86	7.36	F8	7	..	18983b
43	1524	19.2	+33 2	9.5	10.0	F8	2	..	37447i	93	1858	19.4	-19 7	10.4	9.4	Ao	2	..	18288b
44	1635	19.2	+ 9 18	7.7	7.8	A3	6	..	37581i	94	..	19.4	-19 29	..	..	Ao	1	..	18288b
45	1671	19.2	+ 3 36	9.4	9.5	A2	3	..	12755b	95	1850	19.4	-22 47	9.2	10.0	Nb	..	..	M
46	1932	19.2	- 0 1	8.83	8.89	A2	3	..	39867b	96	1851	19.4	-22 50	9.2	8.9	Ao	3	..	18301b
47	1939	19.2	-12 7	9.3	9.3	Ao	4	..	24606b	97	4460	19.4	-25 12	9.20	8.6	B9	5	..	18301b
48	1937	19.2	-12 17	9.2	9.2	Ao	5	..	24606b	98	4459	19.4	-25 53	9.3	8.9	Ko	1	..	20856b
49	1938	19.2	-12 48	8.9	9.9	Ko	3	..	24606b	99	4290	19.4	-26 22	8.7	8.0	Ao	3	..	20856b
50	1985	19.2	-13 41	10.5	10.5	Ao	2	..	24606b	100	4310	19.4	-29 53	9.05	8.6	B9	4	..	42915b

JOHN G. WCLEACH LIBRARY,  
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## ANNALS OF HARVARD COLLEGE OBSERVATORY.

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7<sup>h</sup> 19<sup>m</sup>.4

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	3756	19.4	-33 51	10.6	9.7	F2	2	..	2067ob	51	..	19.7	-11 37	..	..	A5	1	..	24606b
2	3350	19.4	-38 11	10.1	10.2	A2	2	..	2067ob	52	1945	19.7	-12 57	10.1	10.1	Ao	2	..	24606b
3	1222	19.4	-55 9	10.0	10.3	F	1	..	24589b	53	1946	19.7	-13 1	9.7	9.8	A2	3	..	24606b
4	1266	19.5	+46 25	8.2	8.3	A3	4	..	37501i	54	1988	19.7	-13 19	9.5	10.5	Ko	2	..	24606b
5	1627	19.5	+44 40	7.87	8.87	Ko	4	..	37501i	55	1989	19.7	-13 27	10.0	10.8	G5	3	..	24606b
6	1526	19.5	+33 4	7.35	7.33	B9	6	3,8	37569i	56	5395	19.7	-23 45	9.3	8.5	B3	4	..	18301b
7	1385	19.5	+28 0	3.89	4.89	Ko	..	R	2242c	57	4277	19.7	-28 14	8.0	8.0	F2	3	..	8905b
8	1933	19.5	-4 25	8.9	9.0	A3	2	..	38609i	58	4451	19.7	-31 34	9.5	8.6	F2	3	..	42915b
9	..	19.5	-11 7	..	..	Ao	1	..	24606b	59	3760	19.7	-33 22	8.9	8.9	Ao	3	..	42915b
10	1922	19.5	-11 13	8.7	8.8	A2	3	..	20801b	60	3578	19.7	-36 9	6.72	7.0	B5	5	E	7406b
11	1956	19.5	-17 51	9.5	9.5	Ao	2	..	18288b	61	3576	19.7	-36 50	8.3	9.2	K2	3	..	42915b
12	1818	19.5	-18 25	9.2	9.8	G	1	..	18288b	62	3523	19.7	-37 35	10.6	11.1	K5	1	..	2067ob
13	1860	19.5	-20 0	8.03	8.3	A2	5	..	18301b	63	3351	19.7	-38 9	10.1	10.1	A5	2	..	2067ob
14	1852	19.5	-22 40	8.9	8.2	Ao	5	..	18301b	64	3188	19.7	-42 39	10.2	10.1	Ko	2	..	20671b
15	4020	19.5	-27 39	5.13	7.3	K2	..	3,7-	56,123	65	3107	19.7	-46 19	9.6	10.5	Ma	..	..	M
16	4445	19.5	-31 51	8.3	7.9	B8	6	..	42915b	66	2788	19.7	-49 9	7.8	8.5	Fo	8	..	24589b
17	2459	19.5	-51 22	10.5	10.0	A3	3	..	24589b	67	2789	19.7	-49 54	10.0	10.3	K5	1	..	24589b
18	1256	19.5	-54 23	9.4	10.6	K5	1	..	24589b	68	2717	19.7	-50 6	9.2	9.4	A5	3	..	24589b
19	1212	19.6	+55 58	9.2	10.2	Ko	1	..	37526i	69	2460	19.7	-51 18	8.9	9.7	G5	4	..	24589b
20	1717	19.6	+37 13	9.5	10.5	Ko	2	..	37447i	70	1326	19.7	-53 43	8.8	9.1	F5	5	..	24589b
21	1527	19.6	+33 39	8.8	8.8	B9	5	..	37447i	71	1449	19.8	+47 51	7.8	7.8	Ao	6	..	37501i
22	1528	19.6	+33 25	10.0	11.1	K2	2	..	37447i	72	1607	19.8	+34 23	8.6	9.7	K2	2	..	37447i
23	1669	19.6	+25 11	8.7	8.8	A5	1	..	38172i	73	1691	19.8	+4 34	8.8	8.8	Ao	2	..	37580i
24	1526	19.6	+10 21	8.5	8.5	Ao	2	..	37581i	74	1675	19.8	+3 53	9.0	9.1	A2	3	..	37580i
25	1654	19.6	+6 49	9.4	9.4	Ao	2	..	15139b	75	1674	19.8	+3 13	8.7	8.8	A2	4	2,3	39867b
26	2031	19.6	-10 47	9.5	10.5	Ko	1	..	24606b	76	1698	19.8	-1 34	8.8	8.9	A2	3	..	12772b
27	1923	19.6	-11 6	9.3	10.3	Ko	1	..	24606b	77	1924	19.8	-12 1	8.1	9.2	K2	3	..	20801b
28	1944	19.6	-12 8	9.5	9.5	Ao	3	..	24606b	78	1948	19.8	-12 59	10.1	10.1	A	1	..	24606b
29	1881	19.6	-14 33	8.9	10.3	Ma	2	5,1	24594b	79	..	19.8	-13 31	..	..	Ao	1	..	24606b
30	1880	19.6	-14 37	8.1	9.2	K2	4	2,1	24606b	80	1990	19.8	-14 1	8.9	9.9	Ko	4	..	24606b
31	1819	19.6	-18 51	9.3	9.3	Ao	4	..	18288b	81	1918	19.8	-21 25	8.7	8.2	Ao	7	..	18301b
32	1903	19.6	-20 31	8.5	8.5	Ao	6	..	18301b	82	4465	19.8	-25 20	8.9	8.6	B8	5	..	18301b
33	4447	19.6	-31 18	10.2	9.1	Ao	3	..	42915b	83	4427	19.8	-30 15	6.98	7.2	A2	7	0,9	8905b
34	3561	19.6	-35 53	9.7	9.7	Go	3	..	2067ob	84	4428	19.8	-30 54	9.7	9.2	Ao	3	..	42915b
35	3575	19.6	-36 38	8.3	8.2	B9	6	..	42915b	85	4453	19.8	-31 6	8.5	8.0	B9	7	1,4	42915b
36	3109	19.6	-40 32	8.6	9.0	F5	5	..	20671b	86	4454	19.8	-32 1	5.47	5.5	B3	..	0,R	56,123
37	3110	19.6	-40 44	9.2	9.4	Fo	4	..	20671b	87	3570	19.8	-34 20	7.40	8.5	Ko	6	..	42915b
38	3369	19.6	-44 26	7.9	7.9	B8	10	..	20671b	88	3562	19.8	-35 37	8.9	8.5	B9	6	..	42915b
39	3368	19.6	-44 44	8.5	9.0	A2	8	..	20671b	89	3579	19.8	-36 5	10.6	10.6	Go	2	..	2067ob
40	1204	19.6	-57 16	9.0	9.7	G5	1	..	13007b	90	3189	19.8	-42 52	10.0	9.6	Ao	5	..	20671b
41	819	19.6	-59 58	9.7	9.7	Ao	2	..	18486b	91	3371	19.8	-44 26	8.8	9.7	K5	2	..	20671b
42	1528	19.7	+48 16	8.0	8.1	A2	3	..	37515i	92	1224	19.8	-55 35	7.4	8.2	Ao	6	..	12757b
43	1544	19.7	+32 18	8.6	8.6	Ao	4	..	37447i	93	1320	19.8	-56 4	8.4	9.4	Mb	4	..	24589b
44	1545	19.7	+32 6	6.81	6.81	Ao	8	..	37569i	94	1081	19.9	+59 2	9.0	9.5	F8	3	..	37526i
45	1386	19.7	+28 31	9.5	9.6	A2	1	..	38172i	95	1691	19.9	+43 27	6.74	7.81	K2	8	..	37463i
46	1798	19.7	+20 43	6.89	7.03	A5	..	0,7	56,84	96	1568	19.9	+15 55	8.8	8.8	Ao	4	..	37570i
47	1661	19.7	+14 18	9.4	10.4	Ko	1	..	37891i	97	1663	19.9	+13 17	7.66	8.73	K2	4	..	37570i
48	1580	19.7	+11 7	8.5	8.6	A2	3	..	37891i	98	1661	19.9	+13 0	9.7	10.0	F	2	..	37570i
49	1689	19.7	+4 19	8.3	8.9	Go	3	..	12755b	99	1639	19.9	+8 55	8.7	9.2	F8	2	..	37581i
50	1796	19.7	+1 49	8.4	9.5	K2	3	0,3-	12755b	100	1886	19.9	-4 2	8.7	8.7	Ao	3	..	38609i

## THE HENRY DRAPER CATALOGUE.

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7<sup>h</sup> 19<sup>m</sup>.9

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	2026	19.9	m. 9 49	9.5	9.5	Ao	3	..	24606b	51	3769	20.1	m. 33 55	10.6	10.3	Ko	1	..	2067ob
2	1925	19.9	-11 12	9.1	10.1	Ko	3	..	24606b	52	3567	20.1	-35 34	10.1	9.7	F5	4	..	2067ob
3	1949	19.9	-12 59	9.7	9.8	A5	3	..	24606b	53	3531	20.1	-37 38	11.0	10.7	F5	1	..	2067ob
4	1807	19.9	-15 35	10.2	10.2	A	2	..	24594b	54	3192	20.1	-42 49	11.5	10.2	Go	2	..	20671b
5	1822	19.9	-18 9	7.9	8.0	A5	10	..	18288b	55	3178	20.1	-43 13	10.0	9.9	F8	3	..	20671b
6	1853	19.9	-22 10	7.4	8.9	K5	5	..	18301b	56	719	20.1	-70 1	8.22	8.2	F8	7	..	15168b
7	4468	19.9	-25 27	9.0	8.4	Ao	6	..	18301b	57	280	20.2	+76 13	9.4	10.0	G	2	..	37559i
8	R	19.9	-35 54	..	11.1	K5	1	R	2067ob	58	326	20.2	+74 32	9.0	9.6	Go	3	..	37559i
9	3173	19.9	-43 35	9.4	9.6	A3	3	R	20671b	59	400	20.2	+71 26	9.7	9.7	A	1	..	37559i
10	1161	19.9	-52 59	8.8	9.1	F2	4	..	24589b	60	1075	20.2	+57 52	8.5	9.1	Go	5	..	37526i
11	825	19.9	-60 4	9.66	10.0	K	1	..	12757b	61	1200	20.2	+55 19	8.9	9.9	Ko	1	..	37526i
12	1056	20.0	+60 7	9.0	9.8	G5	2	..	37526i	62	1532	20.2	+48 2	9.2	9.3	A2	2	..	37515i
13	1212	20.0	+52 33	8.8	9.4	Go	2	..	37515i	63	1554	20.2	+26 8	8.6	10.0	Ma	1	..	38172i
14	1640	20.0	+9 4	8.5	8.6	A2	3	..	37581i	64	1680	20.2	+22 5	9.8	..	R5	..	R	M
15	1717	20.0	+7 47	8.7	9.1	F5	3	..	15139b	65	1572	20.2	+17 10	9.0	9.1	A2	3	..	3757oi
16	1939	20.0	-4 51	8.5	8.6	A2	3	..	38609i	66	1664	20.2	+14 18	8.7	8.8	A2	3	..	3757oi
17	1940	20.0	-7 56	8.3	8.3	B9	4	..	44407b	67	1643	20.2	+9 28	5.07	5.85	G5	..	O, R	56,84
18	1950	20.0	-12 8	10.4	10.4	Ao	2	..	24606b	68	1719	20.2	+7 46	8.3	9.3	Ko	3	..	37581i
19	1992	20.0	-13 47	9.1	10.1	Ko	5	..	24606b	69	1652	20.2	+5 3	8.16	9.34	K5	3	3,2	15139b
20	1809	20.0	-15 42	10.0	10.3	Fo	2	..	24594b	70	1693	20.2	+4 46	8.50	8.50	Ao	5	..	12755b
21	1906	20.0	-20 55	9.2	8.9	B8	2	..	18288b	71	2103	20.2	-5 20	9.1	9.1	A	3	..	44407b
22	4471	20.0	-25 10	9.45	8.9	A2	4	..	18301b	72	2104	20.2	-5 33	8.6	8.6	Ao	4	..	20802b
23	4304	20.0	-26 11	9.0	8.7	A3	2	..	20856b	73	1952	20.2	-12 53	10.1	10.1	Ao	4	..	24606b
24	4321	20.0	-29 5	7.4	7.3	Ao	7	..	8905b	74	1961	20.2	-17 46	10.0	10.1	A3	2	..	18288b
25	4322	20.0	-30 2	6.59	6.6	B3	8	O, 10	8905b	75	..	20.2	-18 11	..	..	Ao	1	..	18288b
26	3765	20.0	-33 18	8.3	9.4	Go	4	..	42915b	76	5337	20.2	-24 38	10.2	8.7	Fo	3	..	18301b
27	3767	20.0	-33 50	10.6	10.2	F8	2	..	2067ob	77	4286	20.2	-28 38	6.60	6.6	B5	7	..	8905b
28	3566	20.0	-35 29	10.6	10.2	A2	2	..	2067ob	78	3536	20.2	-37 26	10.3	9.7	B8	4	..	2067ob
29	3355	20.0	-38 6	10.8	10.4	Fo	2	..	2067ob	79	3180	20.2	-43 9	10.2	9.9	Go	2	..	20671b
30	3281	20.0	-39 39	9.2	9.3	B9	5	..	20671b	80	562	20.2	-72 0	9.1	10.1	Ko	2	..	15168b
31	1259	20.0	-54 14	8.5	8.8	Ao	8	..	24589b	81	366	20.3	+72 1	8.0	8.8	G5	3	..	37559i
32	726	20.0	-63 34	9.5	9.6	A3	3	..	18486b	82	1574	20.3	+31 49	7.15	7.93	G5	5	..	37569i
33	585	20.0	-72 48	9.5	10.5	Ko	1	..	15168b	83	1665	20.3	+14 18	7.7	7.7	B9	8	..	3757oi
34	207	20.1	+82 53	9.0	9.4	F5	3	..	37546i	84	1935	20.3	+0 40	8.8	8.8	Ao	2	O, 2	39867b
35	1433	20.1	+45 53	8.4	9.4	Ko	3	..	37501i	85	2101	20.3	-2 57	9.1	..	Nb	..	..	M
36	1502	20.1	+30 41	8.7	8.8	A3	2	..	37447i	86	1954	20.3	-12 8	8.5	8.5	Ao	6	..	20801b
37	1679	20.1	+22 7	10.0	..	R5	..	R	M	87	..	20.3	-12 48	..	..	G5	1	..	24606b
38	1610	20.1	+18 21	6.94	7.72	G5	6	O, 5	3757oi	88	1953	20.3	-12 57	10.0	10.3	F2	2	..	24606b
39	2102	20.1	-5 19	9.2	9.2	A	3	..	44407b	89	1996	20.3	-13 56	9.1	10.1	Ko	3	..	24606b
40	1941	20.1	-7 25	8.0	8.3	Fo	4	..	20802b	90	1823	20.3	-18 49	9.1	10.1	Ko	2	..	18288b
41	2028	20.1	-10 0	10.0	10.0	Ao	2	..	24606b	91	1908	20.3	-20 25	9.7	9.1	Ao	3	O, 2	18301b
42	1927	20.1	-11 30	10.2	10.2	Ao	3	..	24606b	92	4481	20.3	-25 34	9.5	8.7	Ao	5	..	18301b
43	1810	20.1	-16 0	5.20	5.03	B3p	8	R	38671i	93	4311	20.3	-26 25	9.3	8.6	A2	2	..	20856b
44	1960	20.1	-17 53	9.1	9.2	A3	4	..	18288b	94	4468	20.3	-31 42	7.9	8.6	K	2	R	18926b
45	1864	20.1	-19 16	9.3	9.6	Ko	1	..	18288b	95	4467	20.3	-31 43	10.2	8.6	B9	4	..	18926b
46	1855	20.1	-22 43	6.10	5.8	B9	..	O, 8	56,84	96	4472	20.3	-31 43	11.2	8.6	Ao	3	..	18926b
47	5402	20.1	-23 10	10.4	8.5	B8	4	..	18301b	97	4471	20.3	-31 50	9.3	8.3	B9	5	..	42915b
48	4475	20.1	-25 21	8.7	8.9	Ko	4	..	18301b	98	4469	20.3	-31 58	8.7	8.2	B8	6	..	42915b
49	4307	20.1	-27 3	8.0	8.9	Ko	2	..	20856b	99	3036	20.3	-41 30	8.3	9.3	Ko	4	..	20671b
50	4328	20.1	-29 6	2.43	2.31	B5p	..	R	28,200	100	3034	20.3	-41 41	10.8	9.6	Ao	4	..	20671b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

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7<sup>h</sup> 20<sup>m</sup>.3

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	2798	m. 20.3	° -49 21	10.2	10.2	A5	2	..	24589b	51	1945	m. 20.6	° +39 32	6.98	7.98	Ko	5	0,7	3750ri
2	1260	20.3	-54 50	8.9	9.2	A2	4	..	24589b	52	1718	20.6	+37 49	8.4	8.5	A3	3	..	37447i
3	1261	20.3	-54 59	8.9	9.7	G5	2	..	24589b	53	1616	20.6	+18 43	7.7	8.0	Fo	6	0,7	37472i
4	813	20.3	-61 48	8.3	8.3	A3	4	..	18486b	54	1617	20.6	+18 21	9.0	9.0	A	3	..	37570i
5	1576	20.4	+31 48	9.4	9.5	A2	2	..	37447i	55	1656	20.6	+ 5 26	8.1	9.1	Ko	3	..	12755b
6	1720	20.4	+ 7 21	9.0	9.1	A2	2	..	15139b	56	1671	20.6	+ 2 17	9.7	9.7	Ao	2	..	12755b
7	1654	20.4	+ 5 49	8.3	8.3	Ao	4	R	12755b	57	1949	20.6	- 7 33	8.7	9.9	K5	1	..	20802b
8	1936	20.4	+ 0 26	9.0	9.8	G5	3	0,2	39867b	58	2032	20.6	- 9 40	9.3	9.3	Ao	4	..	24606b
9	1890	20.4	- 3 39	9.2	10.2	Ko	1	..	20802b	59	..	20.6	-11 45	..	..	B9	4	..	24606b
10	1941	20.4	- 4 13	9.1	9.2	A2	1	..	38609i	60	1957	20.6	-12 35	9.2	10.2	Ko	3	..	24606b
11	1955	20.4	-12 25	10.0	10.3	Fo	3	..	24606b	61	2001	20.6	-13 33	5.82	6.10	Fo	..	2,7	56,84
12	1997	20.4	-13 37	10.0	11.2	K5	1	..	24606b	62	1887	20.6	-14 41	6.59	6.59	Ao	4	0,9-	8903b
13	1885	20.4	-14 12	10.1	10.1	Ao	2	0,2	24594b	63	1814	20.6	-15 36	9.5	9.6	A3	3	..	24594b
14	1824	20.4	-18 27	9.3	9.7	F5	2	..	18288b	64	1815	20.6	-15 45	9.1	9.4	F2	3	..	18288b
15	1868	20.4	-19 55	9.5	9.6	K2	1	..	18288b	65	1915	20.6	-20 49	8.7	8.5	B5	4	..	18301b
16	1912	20.4	-20 31	9.5	8.9	B2	3	..	18301b	66	5346	20.6	-24 52	9.7	8.7	F2	4	..	18301b
17	4335	20.4	-29 57	8.30	9.1	A	2	..	42915b	67	4035	20.6	-27 55	8.1	8.0	A3	2	..	8905b
18	4336	20.4	-29 57	9.2	9.2	K	2	..	42915b	68	4446	20.6	-30 44	9.3	8.9	F8	3	..	42915b
19	3774	20.4	-33 55	9.3	8.9	A2	3	..	42915b	69	3777	20.6	-33 44	10.8	8.9	Ao	4	..	42915b
20	3569	20.4	-35 39	6.34	6.6	B8	6	0,7	11110b	70	3577	20.6	-34 5	8.3	8.8	F5	5	..	42915b
21	3585	20.4	-36 47	8.6	8.0	Ao	5	..	42915b	71	3578	20.6	-34 41	9.9	9.7	A2	3	..	20670b
22	3283	20.4	-39 53	9.50	9.6	Ko	3	..	20671b	72	3358	20.6	-38 36	10.8	10.4	Ao	1	..	20670b
23	3119	20.4	-46 20	10.5	9.9	A	2	E	20671b	73	3184	20.6	-43 54	7.6	9.3	K2	4	..	20671b
24	1162	20.4	-52 19	7.9	8.5	G5	8	..	24589b	74	3023	20.6	-48 0	8.2	8.2	B9	5	..	20858b
25	480	20.5	+68 40	5.80	6.80	Ko	8	5,10	37559i	75	2726	20.6	-50 55	10.5	10.3	A2	2	..	24598b
26	1214	20.5	+56 33	8.8	8.9	A2	4	..	37526i	76	1226	20.6	-55 23	8.6	9.8	K5	2	..	24589b
27	1613	20.5	+35 42	9.0	9.4	F5	3	..	37447i	77	1618	20.7	+18 44	8.3	8.6	Fo	4	..	37570i
28	1550	20.5	+31 57	9.0	10.0	Ko	1	..	37447i	78	1657	20.7	+ 5 11	8.5	9.3	G5	4	0,3	15139b
29	1574	20.5	+17 51	9.2	9.3	A2	2	..	37570i	79	1930	20.7	-11 6	8.7	9.9	K5	3	..	24606b
30	1571	20.5	+15 3	8.14	8.20	A2	5	..	37570i	80	2003	20.7	-13 53	9.0	9.0	Ao	5	..	24606b
31	1663	20.5	+ 6 55	7.7	8.0	Fo	5	..	37581i	81	1948	20.7	-16 44	10.4	11.4	Ko	1	..	24594b
32	1695	20.5	+ 4 39	7.7	8.7	Ko	4	..	37580i	82	1826	20.7	-18 39	9.1	9.1	B8	5	..	18288b
33	2033	20.5	-10 51	9.7	10.3	Go	2	..	24606b	83	1872	20.7	-19 17	9.2	9.6	Ko	2	..	18288b
34	1928	20.5	-11 15	10.0	10.0	Ao	4	..	24606b	84	1923	20.7	-21 17	9.3	8.8	Ao	4	1,4	18288b
35	..	20.5	-11 24	..	..	Ao	2	..	24606b	85	1860	20.7	-22 41	9.0	8.8	Ao	4	..	18301b
36	1999	20.5	-13 26	9.7	10.7	Ko	1	..	24606b	86	5414	20.7	-23 33	10.0	9.4	G5	2	..	18301b
37	1947	20.5	-16 23	10.1	10.1	A	2	..	24594b	87	3579	20.7	-34 10	7.69	8.8	Ko	4	..	42915b
38	1945	20.5	-16 24	10.0	10.0	A	1	..	24594b	88	3589	20.7	-36 40	9.3	8.9	Ao	4	..	42915b
39	1825	20.5	-18 49	6.27	6.35	A3	4	..	42935b	89	3287	20.7	-39 51	10.3	10.4	Ko	1	..	20670b
40	1914	20.5	-20 44	9.7	9.1	A3	2	..	18288b	90	3123	20.7	-40 16	9.2	9.0	B9	4	..	20671b
41	4315	20.5	-26 29	8.3	8.0	Ao	3	..	42935b	91	3121	20.7	-40 54	8.9	8.5	F2	6	..	20671b
42	4314	20.5	-27 1	9.0	8.7	Ao	2	..	20856b	92	3026	20.7	-47 46	7.9	9.0	G5	2	..	20858b
43	3586	20.5	-36 28	9.3	8.9	A2	3	..	42915b	93	2805	20.7	-49 36	9.4	10.3	K5	1	..	24589b
44	3284	20.5	-39 21	7.06	7.7	Ko	8	..	20671b	94	828	20.7	-60 30	9.2	9.5	F	1	..	12757b
45	3196	20.5	-42 33	9.6	10.2	K2	2	..	20671b	95	258	20.7	-78 15	9.3	10.3	Ko	4	..	20652b
46	2911	20.5	-48 49	8.8	9.5	Ko	2	..	20858b	96	1149	20.8	+53 23	9.0	9.6	Go	1	..	37515i
47	1328	20.5	-53 51	10.3	10.3	Ao	2	..	24589b	97	1760	20.8	+38 52	7.05	7.83	G5	5	0,7	3750ri
48	814	20.5	-61 46	7.08	7.5	B8	9	..	18486b	98	1532	20.8	+29 29	9.0	9.1	A2	2	..	38172i
49	439	20.5	-75 30	9.1	10.2	K2	3	..	20652b	99	1531	20.8	+29 17	9.4	9.4	A	1	..	38172i
50	1269	20.6	+46 8	8.9	8.9	Ao	2	..	3750ri	100	1658	20.8	+ 5 47	7.3	8.3	Ko	4	..	37580i



THE HENRY DRAPER CATALOGUE.

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7<sup>h</sup> 20<sup>m</sup>.8

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1892	20.8	- 3 49	9.1	9.1	Ao	2	..	20802b	51	1596	21.0	+21 45	6.45	6.87	F5	..	0,6	56,84
2	1931	20.8	-11 17	10.0	10.0	B8	4	..	24606b	52	1532	21.0	+10 49	6.22	6.22	Ao	8	..	3789ri
3	1958	20.8	-12 50	10.4	10.4	B9	2	..	24606b	53	1648	21.0	+ 9 55	9.12	9.12	A	1	..	3758ri
4	1949	20.8	-16 16	9.1	9.2	A3	3	..	18288b	54	1768	21.0	+ 8 33	8.4	9.4	Ko	2	..	3758ri
5	1951	20.8	-16 45	10.0	10.3	Fo	1	..	24594b	55	1673	21.0	+ 2 27	8.7	9.2	F8	2	..	12755b
6	1950	20.8	-17 2	9.7	10.9	K5	1	..	24594b	56	1707	21.0	- 2 2	7.12	7.68	Go	8	..	12772b
7	1827	20.8	-19 2	10.0	9.1	Fo	2	..	18288b	57	2036	21.0	- 9 57	9.5	9.5	Ao	3	..	24606b
8	1873	20.8	-19 44	9.1	8.5	B9	4	..	18301b	58	1933	21.0	-11 30	10.0	10.8	G5	2	..	24606b
9	1920	20.8	-20 49	8.5	8.6	B5	4	..	18301b	59	1959	21.0	-12 22	8.7	9.9	K5	4	..	24606b
10	1919	20.8	-20 59	6.73	6.4	B2	4	1,4 R	42935b	60	2006	21.0	-13 16	9.2	10.3	K2	2	..	24606b
11	5422	20.8	-23 38	10.0	8.6	A5	4	..	18301b	61	1889	21.0	-14 16	9.1	10.1	Ko	3	5,3	24606b
12	5350	20.8	-24 14	8.7	7.8	B5	4	..	42935b	62	1952	21.0	-16 49	10.2	10.3	A2	1	..	18288b
13	4478	20.8	-31 52	9.5	8.9	A5	3	..	42915b	63	4331	21.0	-26 44	9.0	8.9	B8	1	..	20856b
14	3362	20.8	-39 0	10.8	10.2	F5	2	..	20670b	64	4459	21.0	-30 56	9.2	8.9	F5	2	..	42915b
15	3125	20.8	-40 40	8.6	7.8	A3	7	..	20671b	65	3981	21.0	-32 35	8.6	8.8	A5	4	..	42915b
16	3378	20.8	-44 16	9.2	9.1	B9	6	..	20671b	66	3578	21.0	-35 9	9.95	11.1	K2	1	..	20670b
17	3380	20.8	-44 34	9.8	9.9	A2	3	..	20671b	67	3591	21.0	-36 25	11.3	10.3	Ao	2	..	20670b
18	1324	20.8	-56 29	8.0	9.1	G5	3	..	12757b	68	3592	21.0	-36 41	10.8	10.5	Ao	2	..	20670b
19	829	20.8	-60 7	9.21	8.9	A5	3	2,2	12757b	69	3291	21.0	-39 5	10.1	10.5	K5	1	..	20670b
20	1270	20.9	+46 43	6.78	6.84	A2	8	..	37501i	70	3292	21.0	-39 31	9.9	9.9	F2	2	..	20671b
21	1271	20.9	+46 10	var.	var.	Mb	4	R	37501i	71	3189	21.0	-43 57	8.3	9.6	K5	3	..	20671b
22	1659	20.9	+24 9	8.4	8.5	A2	3	..	38172i	72	3383	21.0	-44 17	9.8	9.7	F5	3	..	20671b
23	1723	20.9	+ 7 29	9.0	9.0	Ao	3	..	15139b	73	2916	21.0	-48 15	9.1	8.8	Ao	4	..	20858b
24	1697	20.9	+ 4 13	8.7	9.1	F5	2	..	12755b	74	831	21.0	-60 3	9.51	10.0	K	1	..	12757b
25	1940	20.9	+ 0 32	8.5	9.5	Ko	1	..	12772b	75	729	21.0	-63 42	9.3	9.9	Go	2	..	18486b
26	2112	20.9	- 5 35	6.08	6.64	Go	..	5,9	56,84	76	1431	21.1	+50 36	8.4	8.7	F2	2	..	37515i
27	2107	20.9	- 6 31	8.9	8.9	Ao	3	..	20802b	77	1618	21.1	+35 50	9.0	10.0	Ko	2	..	37447i
28	2033	20.9	- 9 51	8.7	9.7	Ko	4	..	24606b	78	1387	21.1	+27 30	8.2	8.3	A2	4	..	38172i
29	2035	20.9	-10 34	9.0	8.9	B5	5	..	24606b	79	1805	21.1	+20 27	5.88	6.16	Fo	..	0,8	56,84
30	1888	20.9	-15 2	8.38	9.38	Ko	3	5,1	24606b	80	1943	21.1	- 4 20	6.47	6.45	B9	6	1,7	18560b
31	1828	20.9	-18 15	10.0	10.1	A2	2	..	18288b	81	2037	21.1	- 9 46	8.7	8.7	Ao	5	..	24606b
32	1876	20.9	-19 38	10.0	8.9	B9	2	..	18288b	82	..	21.1	-12 27	..	..	Ao	2	..	24606b
33	4456	20.9	-30 54	8.9	9.7	Ko	1	..	18926b	83	1967	21.1	-17 31	8.9	10.0	K2	4	..	18288b
34	4481	20.9	-31 35	7.5	7.7	Ao	4	..	8905b	84	1829	21.1	-18 12	9.5	10.3	G5	1	..	18288b
35	4482	20.9	-31 37	5.44	6.9	G5	..	5,7	56,123	85	1925	21.1	-21 47	5.93	6.1	A5	..	5,7	56,123
36	3781	20.9	-33 12	9.2	10.0	Ko	2	..	20670b	86	4461	21.1	-30 38	8.3	9.2	K5	2	..	42915b
37	3381	20.9	-44 24	10.2	9.9	Fo	3	..	20671b	87	3594	21.1	-36 22	9.0	10.0	Ko	2	..	42915b
38	2914	20.9	-48 22	9.1	8.8	Fo	4	..	20858b	88	3206	21.1	-42 31	10.0	9.6	Go	3	..	20671b
39	2470	20.9	-51 19	10.2	9.7	Ao	5	..	24589b	89	3162	21.1	-45 4	9.54	9.3	Ao	2	..	20786b
40	1227	20.9	-55 23	6.94	8.2	Ko	6	0,10	12757b	90	3128	21.1	-46 24	8.9	9.4	Fo	4	..	20858b
41	747	20.9	-65 28	9.2	10.2	Ko	3	..	15223b	91	1331	21.1	-53 19	7.0	8.1	Ko	8	..	24589b
42	723	20.9	-69 59	9.08	10.7	Ko	2	..	15168b	92	907	21.1	-58 43	8.1	8.5	Ao	4	2,4	18486b
43	440	20.9	-76 1	10.1	11.1	Ko	1	..	20652b	93	259	21.1	-78 8	8.6	9.8	K5	5	..	20652b
44	304	20.9	-77 9	9.4	9.7	Fo	6	..	20652b	94	492	21.2	+67 2	8.2	9.0	G5	4	..	37713i
45	402	21.0	+71 35	7.37	8.44	K2	3	..	37559i	95	1864	21.2	+40 52	7.31	8.09	G5	6	E	37463i
46	1076	21.0	+57 52	8.5	9.7	K5	3	..	37526i	96	1720	21.2	+36 57	9.1	9.2	A2	4	..	37447i
47	1201	21.0	+55 22	9.4	10.8	Mb	..	..	M	97	1533	21.2	+29 31	9.0	9.5	F8	1	..	38172i
48	1535	21.0	+48 17	7.88	8.66	G5	2	..	37515i	98	1620	21.2	+18 6	8.1	8.1	Ao	4	..	37472i
49	1272	21.0	+46 29	7.78	8.20	F5	5	..	37501i	99	1588	21.2	+11 12	6.31	6.26	B8	9	0,9	38971i
50	1719	21.0	+37 1	9.5	9.9	F5	2	..	37447i	100	1771	21.2	+ 7 59	8.8	9.8	Ko	2	..	15139b

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CAMBRIDGE, MASS., 02138



## ANNALS OF HARVARD COLLEGE OBSERVATORY.

58600

7<sup>h</sup> 21<sup>m</sup>.2

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1682	21.2	+ 2 57	8.3	9.3	Ko	3	5,3	39867b	51	3788	21.4	-33 58	10.6	9.2	A3	5	..	2067ob
2	1806	21.2	+ 1 52	9.0	9.1	A3	2	..	3758oi	52	3600	21.4	-36 48	9.9	10.2	A2	3	..	2067ob
3	2108	21.2	- 6 22	8.9	8.9	Ao	2	..	20802b	53	3132	21.4	-40 9	9.35	9.1	F5	3	..	20671b
4	1908	21.2	- 8 25	9.2	9.3	A2	3	..	44418b	54	3050	21.4	-41 29	9.9	10.2	Ko	2	..	20671b
5	2037	21.2	-10 31	8.6	8.6	B9	6	..	24606b	55	3213	21.4	-42 11	9.1	10.2	K5	2	..	20671b
6	1960	21.2	-12 51	9.2	10.4	K5	2	..	24606b	56	3194	21.4	-43 16	8.0	8.7	Go	7	..	20671b
7	1954	21.2	-16 37	9.2	9.2	B9	3	..	18288b	57	1334	21.4	-53 29	7.3	7.2	B5	10	..	24589b
8	1968	21.2	-17 32	10.0	10.0	Ao	2	..	18288b	58	1228	21.4	-55 3	9.02	9.7	K2	4	..	24589b
9	1878	21.2	-19 15	7.08	8.2	Ko	6	..	18301b	59	441	21.4	-73 44	8.9	9.7	G5	6	..	20652b
10	1922	21.2	-20 13	9.5	9.7	F5	2	..	18288b	60	1432	21.5	+50 19	8.4	9.0	Go	2	..	37515i
11	1928	21.2	-21 42	9.1	8.6	B9	4	..	18301b	61	1538	21.5	+48 24	5.57	5.55	B9p	..	1,9 R	56,84
12	5366	21.2	-25 1	5.86	5.5	B9	..	0,8	56,123	62	1693	21.5	+42 57	7.7	8.7	Ko	5	..	37463i
13	4503	21.2	-25 37	10.7	8.9	B9	4	..	18301b	63	1721	21.5	+37 23	9.1	10.2	K2	2	..	37447i
14	4050	21.2	-27 26	9.0	8.9	B9	2	..	20856b	64	1733	21.5	+19 23	8.5	8.9	F5	3	0,2	3757oi
15	4312	21.2	-29 2	9.5	7.8	A	3	E	20856b	65	1668	21.5	+14 35	10.0	10.0	A	1	..	3757oi
16	3984	21.2	-32 29	9.3	9.2	G5	2	..	42915b	66	1721	21.5	- 0 16	6.88	6.94	A2	8	..	3758oi
17	3985	21.2	-32 54	8.9	9.7	K2	2	..	2067ob	67	1937	21.5	-11 52	8.5	8.6	A3	5	..	20801b
18	3363	21.2	-38 5	7.36	7.5	Fo	5	..	20785b	68	2009	21.5	-13 55	9.1	10.2	K2	3	..	24606b
19	3294	21.2	-39 23	8.9	9.0	Ao	5	..	20671b	69	1892	21.5	-14 35	10.0	10.0	Ao	3	..	24594b
20	3209	21.2	-43 1	9.6	9.4	Fo	3	..	20671b	70	1957	21.5	-16 35	10.0	11.0	Ko	2	..	24594b
21	724	21.2	-69 16	9.4	10.4	Ko	1	..	15223b	71	1864	21.5	-22 40	9.1	8.5	B8	4	..	18301b
22	712	21.3	+63 12	8.8	9.1	Fo	5	..	37526i	72	4510	21.5	-25 52	9.0	8.7	A2	3	..	20856b
23	1078	21.3	+57 47	9.2	9.5	Fo	4	..	37526i	73	4341	21.5	-26 26	7.23	9.0	A2	5	..	42935b
24	1481	21.3	+16 19	9.0	9.0	B8	2	..	3757oi	74	3992	21.5	-32 54	9.9	10.3	Ko	1	..	2067ob
25	1934	21.3	-11 48	8.4	8.4	B9	4	..	20801b	75	3791	21.5	-33 21	10.1	9.2	B9	2	..	18926b
26	1962	21.3	-12 6	9.1	9.2	A2	5	..	24606b	76	3365	21.5	-38 10	9.5	9.8	Ko	4	R	2067ob
27	1961	21.3	-13 1	9.2	9.3	A5	3	..	24606b	77	2736	21.5	-50 25	9.8	9.7	A5	4	..	24589b
28	2007	21.3	-13 36	8.5	8.6	A2	7	..	24606b	78	2476	21.5	-51 31	10.5	10.9	Ko	1	..	24589b
29	4054	21.3	-27 52	8.7	8.3	Ao	3	..	20856b	79	508	21.6	+66 20	7.07	8.07	Ko	5	..	37713i
30	4051	21.3	-27 59	7.5	7.1	B8	3	..	8905b	80	1080	21.6	+57 11	8.5	9.1	Go	4	..	37526i
31	4488	21.3	-32 2	9.0	8.6	A2	4	..	42915b	81	1273	21.6	+46 33	6.63	7.63	Ko	7	..	37501i
32	3586	21.3	-34 56	9.70	10.2	Ko	2	..	2067ob	82	1631	21.6	+44 11	8.9	9.3	F5	2	..	37501i
33	3598	21.3	-36 41	9.3	10.2	G5	3	..	2067ob	83	1389	21.6	+27 30	8.1	9.1	Ko	4	..	38172i
34	3549	21.3	-37 6	7.07	6.9	A3	5	0,7	7406b	84	1806	21.6	+20 37	8.8	9.2	F5	3	3,2	3757oi
35	3295	21.3	-37 6	6.99	..	..	..	..	..	85	1807	21.6	+20 1	8.65	8.65	Ao	2	0,2	37472i
36	3295	21.3	-39 31	8.6	9.4	F5	3	..	20671b	86	1548	21.6	+12 9	6.70	7.70	Ko	6	..	3757oi
37	1332	21.3	-53 43	10.0	10.3	Fo	2	..	24589b	87	1534	21.6	+10 48	8.7	8.7	Ao	2	..	38971i
38	1326	21.3	-56 39	9.7	9.7	A	2	E	24589b	88	1808	21.6	+ 1 7	10.0	10.0	Ao	2	..	3758oi
39	1204	21.4	+55 38	9.9	9.9	A	2	..	37526i	89	2111	21.6	- 2 51	8.0	9.1	K2	2	..	20802b
40	1537	21.4	+48 8	6.90	8.25	Mb	4	..	37501i	90	1949	21.6	- 4 7	8.0	9.1	Ko	1	..	38609i
41	1699	21.4	+ 4 35	8.7	9.3	Go	3	..	12755b	91	1963	21.6	- 7 10	7.98	8.98	Ko	4	..	20802b
42	1683	21.4	+ 3 15	8.7	9.7	Ko	1	..	12755b	92	1912	21.6	- 8 29	9.2	9.2	Ao	2	..	20802b
43	1684	21.4	+ 3 1	8.7	9.9	K5	1	..	3758oi	93	2043	21.6	- 9 53	6.86	6.92	A2	6	0,10	38609i
44	1909	21.4	- 8 54	8.1	8.1	B8	6	..	44418b	94	1964	21.6	-12 21	10.4	10.9	F8	1	..	24606b
45	2038	21.4	-10 21	8.4	8.4	Ao	8	..	24606b	95	1965	21.6	-12 56	9.1	10.1	Ko	3	..	24606b
46	1963	21.4	-12 9	9.1	9.6	F8	4	..	24606b	96	1820	21.6	-15 28	7.02	7.80	G5	3	..	8903b
47	2008	21.4	-13 58	6.76	6.74	B9	5	..	38671i	97	1970	21.6	-17 56	8.1	8.2	A2	7	..	18288b
48	1955	21.4	-17 0	8.7	9.7	Ko	1	..	18288b	98	1831	21.6	-18 9	7.7	7.7	Ao	10	..	18288b
49	4363	21.4	-29 10	9.0	9.2	G5	1	..	20856b	99	1881	21.6	-20 3	10.1	9.7	K2	1	..	18288b
50	4466	21.4	-30 16	8.3	8.3	F2	4	..	42915b	100	1865	21.6	-22 8	9.7	9.1	B9	2	..	18301b

## THE HENRY DRAPER CATALOGUE.

58700

7<sup>h</sup> 21<sup>m</sup>.6

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	5379	21.6	m. ° ' 24 37	9.5	9.2	Ko	2	..	18301b	51	1775	21.9	m. ° ' + 8 33	8.7	8.8	A3	4	..	15139b
2	4500	21.6	-32 2	9.5	8.3	B8	4	..	42915b	52	1667	21.9	+ 5 21	8.5	9.1	Go	3	..	12755b
3	3581	21.6	-35 31	10.3	10.3	F2	2	..	20670b	53	1810	21.9	+ 1 48	9.0	9.6	Go	1	..	12755b
4	3602	21.6	-36 3	10.6	10.3	B9	2	..	20670b	54	1944	21.9	+ 0 26	8.3	9.1	G5	2	..	3758oi
5	3557	21.6	-37 46	7.5	7.0	A5	5	E	42928b	55	2118	21.9	- 5 40	7.7	8.8	K2	4	..	20802b
6	3300	21.6	-39 35	10.1	9.8	Ao	3	..	20671b	56	..	21.9	- 6 29	Nov.	Nov.	Pec.	..	R	M
7	3134	21.6	-40 17	9.2	9.4	Fo	3	..	20671b	57	2044	21.9	-10 17	10.1	10.1	Ao	2	..	24606b
8	3392	21.6	-45 2	9.24	9.7	G5	1	..	20786b	58	2012	21.9	-13 57	9.3	9.3	Ao	4	..	24606b
9	2477	21.6	-51 52	10.5	11.1	K2	1	..	24598b	59	1897	21.9	-14 45	9.0	9.0	Ao	4	..	18983b
10	327	21.7	+74 33	8.0	8.3	F2	6	..	37559i	60	1822	21.9	-15 34	9.5	10.6	K2	3	..	24594b
11	1621	21.7	+35 19	8.2	9.0	G5	3	..	37447i	61	1973	21.9	-17 37	8.5	8.9	F5	6	..	18288b
12	1687	21.7	+22 21	6.92	8.10	K5	4	..	37472i	62	1833	21.9	-18 31	9.7	9.7	Ao	3	..	18288b
13	1573	21.7	+15 52	var.	var.	A2	3	R	37570i	63	1935	21.9	-20 12	7.63	8.0	Fo	6	..	18301b
14	1655	21.7	+ 9 15	7.7	8.7	Ko	4	..	37581i	64	1936	21.9	-20 42	7.04	6.9	B9	3	4,9	42935b
15	1774	21.7	+ 8 29	3.09	3.04	B8	..	R	56,84	65	4353	21.9	-26 39	10.7	9.2	Ao	1	..	20856b
16	2113	21.7	- 2 47	8.5	8.5	Ao	4	..	20802b	66	4506	21.9	-31 32	6.20	6.8	B5	8	..	8905b
17	1914	21.7	- 8 47	9.5	9.5	Ao	1	..	44418b	67	3999	21.9	-32 19	8.6	8.0	Ao	6	..	42915b
18	2040	21.7	-10 44	8.6	8.6	Ao	6	..	24606b	68	3605	21.9	-36 34	10.1	10.0	A5	3	..	20670b
19	..	21.7	-12 3	..	..	Ao	1	..	24606b	69	3561	21.9	-37 27	11.7	10.0	A	2	..	20670b
20	1894	21.7	-14 53	9.1	8.9	B	1	..	18983b	70	3203	21.9	-43 11	7.8	7.7	Ao	9	..	20671b
21	1821	21.7	-15 20	10.4	10.5	A2	2	..	24594b	71	3204	21.9	-43 31	10.2	10.1	Fo	3	..	20671b
22	1971	21.7	-17 55	7.9	7.9	B8	7	..	18983b	72	2738	21.9	-50 55	8.9	8.8	Ao	5	..	24589b
23	5448	21.7	-23 29	10.0	9.4	Ko	2	..	18301b	73	1229	21.9	-55 32	9.4	9.4	Ao	4	..	24589b
24	4061	21.7	-27 56	9.5	8.9	Ao	1	..	20856b	74	824	21.9	-62 5	7.05	8.5	Ko	7	..	18486b
25	1263	21.7	-54 57	9.0	10.0	Ko	1	..	24589b	75	686	21.9	-66 6	9.1	9.9	G5	2	..	15223b
26	1612	21.8	+34 9	9.1	9.1	Ao	2	..	37569i	76	432	21.9	-75 3	8.58	9.7	K5	6	..	20652b
27	1508	21.8	+30 31	8.8	9.6	G5	2	..	37569i	77	290	22.0	+77 3	8.0	9.1	K2	3	..	37559i
28	1602	21.8	+21 39	5.27	5.69	F5	..	0,10	56,84	78	1452	22.0	+47 30	7.8	8.6	G5	3	..	37501i
29	1574	21.8	+15 30	7.02	6.97	B8	5	2,8	37472i	79	1677	22.0	+25 14	8.2	8.5	Fo	3	..	38172i
30	1725	21.8	+ 7 33	8.1	8.1	B9	4	..	37581i	80	1810	22.0	+20 21	9.8	9.8	A	1	E	37570i
31	1702	21.8	+ 4 9	9.7	10.3	Go	2	..	12755b	81	1734	22.0	+19 15	7.18	7.96	G5	6	5,5	37570i
32	1950	21.8	- 5 1	8.40	9.40	Ko	2	..	20802b	82	1657	22.0	+ 8 57	7.9	8.0	A2	4	..	37581i
33	1968	21.8	-12 46	9.5	10.5	Ko	1	..	24606b	83	1688	22.0	+ 3 46	8.3	9.5	K5	2	..	3758oi
34	1895	21.8	-14 23	10.0	10.0	Ao	3	..	24594b	84	1677	22.0	+ 2 40	8.3	8.1	B2	5	..	3758oi
35	1972	21.8	-17 8	9.2	10.4	K5	2	..	24594b	85	2120	22.0	- 5 19	9.1	9.2	A2	4	..	20802b
36	1832	21.8	-18 58	9.5	10.3	G5	1	..	18288b	86	2046	22.0	- 9 27	10.0	10.0	A	2	..	44418b
37	1883	21.8	-19 58	9.5	9.6	B9	2	..	18288b	87	2047	22.0	-10 18	9.0	9.0	Ao	5	..	24606b
38	1936	21.8	-22 1	9.1	8.2	B8	5	..	18301b	88	2045	22.0	-10 38	10.0	10.0	Ao	2	..	24606b
39	3560	21.8	-37 30	9.9	9.7	Ao	3	..	20670b	89	2046	22.0	-10 51	8.7	8.7	Ao	8	..	24606b
40	3201	21.8	-43 53	9.4	9.6	Fo	4	..	20671b	90	1938	22.0	-11 23	9.3	10.3	Ko	3	..	24606b
41	3393	21.8	-44 23	9.1	9.1	B9	7	..	20671b	91	1969	22.0	-12 59	6.77	6.75	B9	5	R	38671i
42	3395	21.8	-44 58	9.34	9.9	G5	1	..	20671b	92	1899	22.0	-14 5	10.2	10.2	Ao	2	..	24606b
43	2818	21.8	-49 58	9.24	10.3	K2	2	..	24589b	93	1958	22.0	-16 17	9.0	9.3	F2	2	..	18288b
44	1212	21.8	-57 54	8.0	8.8	Go	3	..	12757b	94	1959	22.0	-16 47	10.1	10.1	B9	2	..	24594b
45	1041	21.9	+58 25	8.6	9.2	Go	4	..	37526i	95	..	22.0	-17 59	..	..	A2	2	..	24594b
46	1535	21.9	+29 37	7.41	7.55	A5	5	..	37569i	96	1835	22.0	-18 49	10.2	10.2	A	1	..	18288b
47	1564	21.9	+26 26	7.15	7.21	A2	7	..	38172i	97	4355	22.0	-26 36	7.9	8.4	Ko	3	..	20856b
48	1663	21.9	+24 11	8.6	8.6	Ao	2	..	37472i	98	3799	22.0	-33 42	8.9	9.4	G5	6	..	20670b
49	1551	21.9	+12 52	8.5	9.6	K2	1	..	38971i	99	3565	22.0	-37 55	10.6	10.5	Ao	3	..	20670b
50	1589	21.9	+11 10	9.0	9.1	A2	1	..	38971i	100	3136	22.0	-40 58	7.7	7.6	F2	9	..	20671b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

58800

7<sup>h</sup> 22<sup>m</sup>.0

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	3035	22.0	-47 22	9.1	9.4	Ao	3	..	20858b	51	2740	22.2	-50 5	10.5	10.0	Ao	2	..	24589b
2	2820	22.0	-49 34	8.6	9.1	Fo	6	..	24589b	52	1266	22.2	-54 49	9.4	9.4	Ao	5	..	24589b
3	565	22.0	-71 20	8.7	10.1	Ma	4	..	15168b	53	709	22.2	-64 26	9.4	9.9	F8	3	..	15223b
4	442	22.0	-73 57	8.9	9.9	Ko	5	..	20652b	54	632	22.2	-70 7	10.0	10.4	F5	3	..	15168b
5	105	22.0	-86 52	6.41	6.8	F2	7	3,9	11010b	55	1630	22.3	+49 53	5.36	5.78	F5	..	0,9	56,84
6	636	22.1	+64 50	8.35	9.35	Ko	2	..	37713i	56	1436	22.3	+45 52	9.4	10.0	G	1	..	37501i
7	972	22.1	+61 18	8.9	9.2	Fo	4	..	37526i	57	1696	22.3	+43 33	8.9	9.5	Go	1	..	37501i
8	1689	22.1	+22 52	8.4	9.4	Ko	2	..	37472i	58	1534	22.3	+33 15	8.6	9.6	Ko	3	..	37569i
9	1671	22.1	+14 53	7.59	8.66	K2	4	..	37570i	59	2117	22.3	- 3 2	8.5	8.5	B9	4	..	20802b
10	1811	22.1	+ 1 40	7.4	8.4	Ko	5	..	37580i	60	1955	22.3	- 4 8	8.6	8.6	Ao	1	..	38609i
11	1952	22.1	- 4 45	8.4	8.5	A2	4	..	20802b	61	1971	22.3	- 8 2	8.9	8.9	Ao	2	..	20802b
12	1917	22.1	- 8 19	8.6	8.6	Ao	3	..	20802b	62	2051	22.3	-10 22	10.4	10.4	Ao	2	..	24606b
13	2052	22.1	- 9 36	9.0	9.0	Ao	4	..	44418b	63	1940	22.3	-11 10	8.3	9.3	Ko	5	..	24606b
14	2049	22.1	- 9 52	10.0	10.0	Ao	3	..	24606b	64	1973	22.3	-12 44	9.2	10.3	K2	2	..	24606b
15	1939	22.1	-11 59	10.5	10.6	A3	2	..	24606b	65	1901	22.3	-15 4	10.0	10.0	Ao	2	..	24594b
16	1971	22.1	-12 15	8.5	8.5	Ao	8	..	24606b	66	4362	22.3	-26 49	8.1	8.3	A2	6	2,2	20856b
17	2014	22.1	-13 27	9.2	9.2	B9	5	..	24606b	67	4490	22.3	-30 5	8.40	8.2	B8	5	..	42915b
18	1824	22.1	-15 24	9.3	9.3	Ao	4	..	24594b	68	3590	22.3	-35 24	8.9	9.4	A3	2	..	42915b
19	1823	22.1	-15 43	9.1	9.2	A5	4	..	18288b	69	3568	22.3	-38 1	9.9	9.7	A2	4	..	20670b
20	1960	22.1	-16 32	10.1	11.1	Ko	1	..	24594b	70	3059	22.3	-41 55	10.1	9.8	A2	2	..	20671b
21	1837	22.1	-18 33	8.5	8.5	B8	7	..	18288b	71	3147	22.3	-46 3	8.8	8.7	Ao	5	..	20858b
22	5394	22.1	-24 50	10.7	9.2	Ao	2	..	18301b	72	2485	22.3	-51 17	8.2	8.2	F8	8	..	24589b
23	4518	22.1	-26 2	9.0	8.3	B8	5	..	20856b	73	741	22.3	-67 6	9.3	9.3	Ao	4	..	15223b
24	3587	22.1	-35 12	10.6	10.5	Ao	2	..	20670b	74	634	22.3	-70 48	9.2	10.4	K5	2	..	15168b
25	3220	22.1	-42 17	8.5	9.4	K5	4	..	20671b	75	1631	22.4	+49 23	8.6	9.0	F5	1	..	37515i
26	2925	22.1	-48 41	9.1	9.1	F8	4	..	20858b	76	1394	22.4	+27 2	9.1	10.1	K	1	..	38172i
27	587	22.1	-72 24	9.9	10.7	G5	1	..	15168b	77	1556	22.4	+12 22	8.3	9.5	K5	1	..	38971i
28	1083	22.2	+59 37	9.2	9.3	A5	2	..	37526i	78	1728	22.4	+ 7 27	8.7	9.5	G5	1	..	37581i
29	1614	22.2	+34 39	7.37	8.15	G5	4	..	37569i	79	1951	22.4	+ 0 34	9.0	9.3	F2	2	..	37580i
30	1559	22.2	+32 5	8.8	9.4	Go	4	..	37569i	80	1919	22.4	- 8 39	9.1	10.1	K	1	R	20802b
31	1947	22.2	+ 0 3	9.03	9.03	Ao	3	..	12772b	81	1941	22.4	-11 31	9.0	..	Rp	1	R	24606b
32	1725	22.2	- 0 13	8.98	9.04	A2	3	..	12772b	82	1942	22.4	-12 1	8.3	8.3	B9	10	..	24606b
33	2121	22.2	- 5 22	9.3	9.3	Ao	2	..	20802b	83	1974	22.4	-12 18	9.1	9.4	Fo	4	..	24606b
34	2048	22.2	- 9 21	9.1	9.6	F8	4	..	44418b	84	1826	22.4	-15 57	9.1	9.1	Ao	7	..	18288b
35	2050	22.2	- 9 29	9.2	9.3	A3	2	..	44418b	85	1941	22.4	-22 1	9.0	9.9	Ko	2	..	18301b
36	2050	22.2	-10 33	10.0	10.8	G5	1	..	24606b	86	1871	22.4	-22 53	7.9	7.2	Ao	4	..	42935b
37	..	22.2	-11 51	..	..	B9	2	..	24606b	87	5400	22.4	-24 16	8.7	8.0	A2	3	..	42935b
38	2015	22.2	-13 18	10.2	10.5	Fo	2	..	24606b	88	4517	22.4	-31 27	7.9	7.3	A2	4	..	8905b
39	1825	22.2	-15 41	8.3	8.4	A2	6	0,8-	18983b	89	3805	22.4	-33 41	10.3	9.5	F8	5	..	20670b
40	1976	22.2	-17 7	9.1	9.9	G5	1	..	18288b	90	3569	22.4	-37 57	8.6	8.5	B8	8	..	20670b
41	1975	22.2	-17 58	9.3	9.6	F2	3	..	24594b	91	3212	22.4	-43 9	10.5	10.1	F5	3	..	20671b
42	1885	22.2	-19 48	8.7	9.1	Ko	2	..	18301b	92	3174	22.4	-45 30	10.0	9.6	F8	2	..	20671b
43	1942	22.2	-20 5	9.2	9.7	Ko	1	..	18288b	93	1166	22.4	-52 5	10.2	10.2	G5	2	..	24589b
44	1940	22.2	-20 19	9.3	9.1	B8	2	..	18288b	94	1167	22.4	-52 57	10.9	10.6	A	1	..	24589b
45	4360	22.2	-26 29	9.7	8.9	A3	2	..	20856b	95	909	22.4	-58 18	6.64	7.7	G5	8	0,9	18486b
46	4070	22.2	-27 58	8.1	8.1	Fo	2	..	8905b	96	635	22.4	-70 4	9.6	10.4	G5	1	..	15168b
47	3801	22.2	-33 11	9.9	9.7	Ao	2	..	20670b	97	1622	22.5	+35 33	9.0	9.6	Go	2	..	37447i
48	3588	22.2	-35 45	9.9	10.5	Ko	2	..	20670b	98	1395	22.5	+27 45	6.62	7.62	Ko	5	0,7	37569i
49	3139	22.2	-41 0	10.1	9.4	Ao	3	..	20671b	99	1606	22.5	+21 46	7.07	7.85	G5	4	..	37472i
50	3222	22.2	-42 56	9.0	9.6	Ko	3	..	20671b	100	1577	22.5	+15 44	8.3	8.8	F8	3	..	37570i

## THE HENRY DRAPER CATALOGUE.

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7<sup>h</sup> 22<sup>m</sup>.5

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1976	22.5	-12 18	9.3	9.3	Ao	4	..	24606b	51	1946	22.7	-11 51	9.3	9.3	Ao	6	..	24606b
2	2018	22.5	-13 11	10.0	9.8	B	2	..	20801b	52	1978	22.7	-12 9	8.5	9.6	K2	4	..	24606b
3	1903	22.5	-14 12	10.4	11.6	K5	1	..	24606b	53	1977	22.7	-12 23	10.4	10.4	A	2	..	24606b
4	1839	22.5	-18 52	10.0	10.0	B9	3	..	18288b	54	1980	22.7	-17 40	5.70	5.98	Fo	6	..	38671i
5	1944	22.5	-20 24	9.7	9.1	Ao	1	..	18288b	55	1890	22.7	-19 44	9.3	9.2	B9	3	..	18288b
6	5476	22.5	-23 20	10.2	8.9	B8	3	..	18301b	56	1942	22.7	-21 24	9.5	9.1	Ao	3	..	18301b
7	5477	22.5	-23 31	6.50	6.8	Ao	7	..	42935b	57	1943	22.7	-21 37	9.2	8.5	Ao	5	..	18301b
8	4015	22.5	-32 34	10.3	9.2	Ao	3	..	20670b	58	5408	22.7	-24 7	10.0	9.2	Ao	3	..	18301b
9	3594	22.5	-35 23	9.5	9.0	Ao	3	..	42915b	59	4350	22.7	-28 38	8.9	8.4	Fo	3	..	20856b
10	3375	22.5	-38 35	8.3	8.2	F5	6	..	20671b	60	3602	22.7	-34 27	11.3	10.0	Fo	3	..	20670b
11	3141	22.5	-40 8	10.8	10.2	A	1	..	20670b	61	3603	22.7	-34 59	7.80	8.2	Ko	5	..	42915b
12	2825	22.5	-49 49	10.5	10.0	F5	3	..	24589b	62	3066	22.7	-41 54	7.1	8.1	K5	7	..	20671b
13	1232	22.5	-55 45	8.5	9.1	Go	3	..	24589b	63	711	22.7	-64 30	8.7	8.7	Ao	7	..	15223b
14	1331	22.5	-56 24	9.1	9.5	Ao	2	..	24589b	64	742	22.7	-67 10	8.6	9.6	Ko	4	..	15223b
15	1218	22.5	-57 6	8.8	9.7	K	1	E	24589b	65	1059	22.8	+60 43	8.9	9.5	G	2	..	37526i
16	687	22.5	-66 21	8.3	8.3	Ao	4	1,8	8913b	66	1060	22.8	+60 41	8.5	8.9	F5	3	..	37526i
17	933	22.6	+62 43	6.77	6.77	Ao	8	..	37526i	67	1632	22.8	+49 27	8.4	8.5	A2	3	..	37515i
18	1218	22.6	+56 29	8.6	9.2	Go	3	..	37526i	68	1683	22.8	+25 28	8.5	9.3	G5	2	..	38172i
19	1665	22.6	+24 52	7.41	7.91	F8	4	..	37472i	69	1607	22.8	+21 53	9.4	10.0	Go	2	..	37472i
20	1667	22.6	+24 29	9.4	10.4	Ko	1	..	38172i	70	1559	22.8	+12 23	9.0	9.4	F5	1	..	37570i
21	1485	22.6	+16 11	9.4	9.5	A3	3	..	37570i	71	1661	22.8	+ 9 43	8.5	9.3	G5	2	..	37581i
22	1678	22.6	+13 49	8.8	9.2	F5	2	..	37570i	72	1660	22.8	+ 9 8	4.60	5.60	Ko	..	0,9 R	56,84
23	1729	22.6	+ 7 9	5.34	5.48	A5	..	0,8 R	56,84	73	2123	22.8	- 2 52	8.4	8.3	B5	7	..	20802b
24	1674	22.6	+ 6 7	8.4	8.4	Ao	4	0,4	12755b	74	2117	22.8	- 6 8	9.1	9.9	G5	1	..	20802b
25	1707	22.6	+ 4 37	9.0	9.8	G5	2	..	12755b	75	2058	22.8	-10 1	8.61	9.61	Ko	4	..	24606b
26	1812	22.6	+ 1 48	9.0	9.1	A2	2	..	12755b	76	..	22.8	-12 16	..	..	Ao	2	..	24606b
27	2053	22.6	-10 52	9.7	10.3	G	1	..	24606b	77	1844	22.8	-18 45	9.1	9.5	F5	4	..	18288b
28	1945	22.6	-11 17	8.3	8.3	Ao	8	..	24606b	78	1874	22.8	-22 53	5.48	5.29	B2p	..	R	56,84
29	1944	22.6	-11 37	10.4	10.4	B9	2	..	24606b	79	3614	22.8	-36 24	9.9	9.9	Ao	4	..	20670b
30	..	22.6	-12 27	..	..	Ao	3	..	24606b	80	3576	22.8	-37 27	10.3	10.2	G5	2	..	20670b
31	1829	22.6	-15 22	10.4	10.5	A2	2	..	24594b	81	1170	22.8	-52 55	7.6	8.2	Fo	8	..	24589b
32	1978	22.6	-17 23	10.1	10.6	F8	1	..	24594b	82	838	22.8	-60 18	8.4	9.4	Go	2	..	12757b
33	1840	22.6	-18 53	9.7	9.8	A5	3	..	18288b	83	567	22.8	-71 23	10.7	10.7	A	3	..	15168b
34	4367	22.6	-26 19	8.9	8.6	A3	4	..	20856b	84	309	22.9	+75 19	9.07	9.85	G5	1	..	37559i
35	3612	22.6	-36 19	9.9	10.1	Fo	3	..	20670b	85	405	22.9	+71 48	7.57	7.65	A3	6	..	37559i
36	3376	22.6	-38 49	9.9	9.4	Ao	2	..	20671b	86	1697	22.9	+43 46	8.0	8.6	Go	3	..	37463i
37	2826	22.6	-49 43	7.8	9.2	Ko	8	..	24589b	87	1623	22.9	+35 1	7.92	7.92	Ao	6	..	37569i
38	2486	22.6	-51 29	10.2	10.3	Go	1	..	24589b	88	1591	22.9	+31 14	9.0	9.6	G	2	..	37569i
39	1169	22.6	-52 42	10.0	10.0	Ao	2	..	24589b	89	1727	22.9	+23 2	8.8	8.9	A2	2	..	37472i
40	1336	22.6	-53 47	10.2	10.5	Fo	1	..	24589b	90	1694	22.9	+22 2	8.0	9.0	Ko	2	..	37472i
41	836	22.6	-60 39	7.7	8.2	Ao	6	0,7	12757b	91	1578	22.9	+15 34	9.7	10.2	F8	2	..	37570i
42	753	22.6	-65 16	8.09	9.6	Ko	5	..	15223b	92	..	22.9	+15 10	..	..	A2	1	..	37570i
43	445	22.6	-76 14	8.2	8.7	F8	7	..	20652b	93	1690	22.9	+ 3 29	9.4	9.9	F8	3	..	12755b
44	1084	22.7	+59 32	8.2	8.8	Go	3	..	37526i	94	1813	22.9	+ 1 43	8.3	8.6	F2	4	..	37580i
45	1436	22.7	+50 11	8.0	8.4	F5	3	..	37515i	95	1976	22.9	- 7 48	8.9	8.9	Ao	3	..	20802b
46	1562	22.7	+31 59	4.18	4.46	Fo	..	R	1757c	96	2055	22.9	-11 0	9.0	10.0	Ko	2	..	24606b
47	1566	22.7	+26 49	9.1	9.9	G5	1	..	38172i	97	1947	22.9	-11 9	9.5	9.5	Ao	3	..	24606b
48	1726	22.7	- 1 0	8.5	9.7	K5	1	..	12772b	98	1979	22.9	-12 13	8.5	8.9	F5	7	..	24606b
49	1958	22.7	- 4 15	8.9	8.9	Ao	1	..	38609i	99	2023	22.9	-13 42	9.7	9.7	A	3	..	24606b
50	2054	22.7	-10 39	9.5	9.9	F5	3	..	24606b	100	2022	22.9	-13 48	9.7	9.8	A3	4	..	24606b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

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7<sup>h</sup> 22<sup>m</sup>.9

H.D.	DM.	R.A. 1900	Dec. 1900	Par.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Par.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1832	22.9	-15 18	9.2	9.2	Ao	4	..	24594b	51	4519	23.1	-30 34	9.3	8.6	Ao	4	..	42915b
2	1833	22.9	-15 32	9.7	9.7	Ao	5	..	24594b	52	4534	23.1	-32 0	8.3	8.9	Ko	3	..	42915b
3	1834	22.9	-16 3	9.7	11.1	Mb	2	..	24594b	53	3309	23.1	-39 22	8.3	9.4	K2	3	..	20671b
4	1981	22.9	-17 20	8.7	9.0	Fo	4	..	18288b	54	1172	23.1	-52 58	9.9	11.1	K5	1	..	24589b
5	1893	22.9	-19 18	9.3	9.1	B8	3	..	18288b	55	1267	23.1	-54 33	9.5	9.5	Ao	3	..	24589b
6	1892	22.9	-19 47	8.1	7.9	B9	6	..	18301b	56	367	23.2	+72 39	8.9	9.4	F8	3	..	37559i
7	3595	22.9	-35 59	10.3	10.5	Fo	2	..	20670b	57	1217	23.2	+52 12	6.64	6.78	A5	8	..	37515i
8	3615	22.9	-36 14	10.1	10.2	B9	3	..	20670b	58	1771	23.2	+38 40	7.7	8.5	G5	3	0.3	37447i
9	2830	22.9	-49 31	10.2	10.0	F5	2	..	24589b	59	1579	23.2	+15 20	6.07	6.07	Ao	10	..	3737oi
10	2749	22.9	-50 18	10.0	9.7	G5	5	..	24589b	60	1562	23.2	+12 21	8.3	8.3	Ao	2	..	37891i
11	493	23.0	+67 9	8.0	9.2	K5	3	..	37713i	61	1780	23.2	+ 8 43	7.9	8.9	Ko	3	..	37581i
12	1437	23.0	+50 9	7.92	8.70	G5	3	..	37515i	62	1714	23.2	+ 4 21	8.2	9.0	G5	4	..	12755b
13	1720	23.0	+42 17	8.6	8.7	A3	4	..	37463i	63	1691	23.2	+ 3 35	7.9	8.7	G5	2	..	3758oi
14	1624	23.0	+35 23	7.22	8.29	K2	4	..	37569i	64	1727	23.2	- 1 3	9.4	9.5	A2	1	..	12772b
15	1730	23.0	+ 7 39	9.4	9.4	A	2	..	37581i	65	2129	23.2	- 2 53	8.4	8.5	A3	5	..	20802b
16	1815	23.0	+ 1 32	9.0	9.1	A5	2	..	3758oi	66	2061	23.2	- 9 14	9.2	10.4	K5	2	..	44418b
17	1952	23.0	+ 0 48	9.04	9.18	A5	1	..	12772b	67	1951	23.2	-11 21	5.86	6.28	F5	6	R	38671i
18	2126	23.0	- 2 41	6.85	7.85	Ko	7	..	20802b	68	1951	23.2	-11 21	5.86	6.28	Ao	6	R	38671i
19	2125	23.0	- 5 14	9.7	9.7	Ao	1	..	20802b	69	1950	23.2	-11 31	8.7	9.7	Ko	3	..	24606b
20	2119	23.0	- 6 9	9.7	9.7	Ao	1	..	20802b	70	1952	23.2	-11 49	9.2	10.2	Ko	5	..	24606b
21	1948	23.0	-11 36	10.0	10.0	Ao	3	..	24606b	71	1981	23.2	-12 29	9.7	9.7	Ao	4	..	24606b
22	2024	23.0	-13 25	8.33	8.39	A2	7	..	24606b	72	1911	23.2	-15 0	9.7	10.5	G5	1	..	24594b
23	1984	23.0	-17 17	10.1	10.2	A2	2	..	24594b	73	1985	23.2	-17 51	10.4	10.4	A	1	..	24594b
24	1983	23.0	-17 24	9.7	10.7	Ko	2	..	24594b	74	1846	23.2	-18 17	7.4	7.4	Ao	7	..	8903b
25	1948	23.0	-20 25	10.0	9.2	Ao	3	..	18288b	75	1847	23.2	-18 17	8.5	8.5	B9	8	..	18288b
26	3813	23.0	-33 56	5.98	6.1	B3	..	0, R	56,123	76	1951	23.2	-20 57	7.7	8.6	Go	5	R	18301b
27	3607	23.0	-34 45	7.8	8.4	Ko	3	..	42915b	77	1951	23.2	-20 57	7.7	8.6	A2	5	R	18301b
28	3616	23.0	-36 7	10.8	10.5	Fo	2	..	20670b	78	3817	23.2	-33 32	10.8	8.9	Ao	5	..	20670b
29	3413	23.0	-44 50	9.8	10.4	A2	3	..	20786b	79	3072	23.2	-41 48	8.3	7.8	B8	7	..	20671b
30	3181	23.0	-45 49	9.1	8.7	Ao	3	..	20858b	80	1235	23.2	-55 36	9.0	10.0	Ko	1	..	24589b
31	446	23.0	-76 33	10.6	10.7	A3	2	..	20652b	81	1333	23.2	-56 43	8.7	9.5	A	2	E	24589b
32	484	23.1	+68 36	8.8	8.8	Ao	3	..	38155i	82	1438	23.3	+45 53	8.8	9.3	F8	2	..	37501i
33	934	23.1	+61 58	6.75	7.53	G5	7	0.8	37676i	83	1670	23.3	+41 49	7.8	8.8	Ko	3	..	37463i
34	1633	23.1	+49 5	7.16	7.22	A2	5	..	37515i	84	1669	23.3	+41 5	6.99	6.99	Ao	9	..	37463i
35	1667	23.1	+41 26	8.9	9.0	A2	1	..	37463i	85	1955	23.3	+39 32	8.4	8.5	A2	3	E	37463i
36	1725	23.1	+37 21	8.0	8.3	Fo	5	..	37447i	86	1728	23.3	+23 1	8.4	9.8	Ma	3	..	37472i
37	1396	23.1	+28 19	5.04	5.10	A2	..	0,10	2242c	87	1610	23.3	+21 9	8.0	8.1	A5	..	..	M
38	1670	23.1	+24 2	8.4	8.4	Ao	3	..	37472i	88	1609	23.3	+21 6	Neb.	Neb.	Pe	..	0.4 R	76,22
39	1680	23.1	+13 49	8.4	8.7	F2	3	..	3757oi	89	1631	23.3	+18 1	8.5	9.3	G5	2	0.2	37472i
40	1712	23.1	+ 4 19	9.0	9.0	Ao	2	2,2	3758oi	90	1781	23.3	+ 8 8	7.9	8.4	F8	4	..	37581i
41	1816	23.1	+ 1 49	8.7	9.9	K5	2	..	12755b	91	2127	23.3	- 5 45	8.7	9.7	Ko	2	..	20802b
42	1953	23.1	+ 0 39	8.3	9.3	Ko	5	..	3758oi	92	1953	23.3	-11 43	9.5	9.8	Fo	5	..	24606b
43	1727	23.1	- 1 26	8.5	9.5	Ko	1	..	12772b	93	1912	23.3	-14 28	10.1	10.1	Ao	3	..	24594b
44	2059	23.1	- 9 27	9.1	9.5	F5	4	..	44418b	94	1837	23.3	-15 53	9.0	8.8	B3	5	..	18288b
45	1908	23.1	-14 17	9.5	9.5	Ao	4	3,4	24606b	95	1897	23.3	-19 56	8.63	8.5	Ao	4	..	18301b
46	1909	23.1	-14 58	10.0	10.0	Ao	2	..	24594b	96	5504	23.3	-23 35	10.4	9.1	Ao	3	..	18301b
47	1835	23.1	-15 31	9.5	9.5	Ao	4	..	24594b	97	5426	23.3	-24 50	8.0	7.7	Ao	4	..	42935b
48	1845	23.1	-18 57	10.0	10.1	A2	1	..	18288b	98	4362	23.3	-28 4	9.5	8.9	A	1	..	20856b
49	1895	23.1	-19 56	9.3	9.2	A2	3	..	18288b	99	3611	23.3	-34 6	6.75	7.4	F8	7	R	42915b
50	1945	23.1	-21 26	9.5	9.7	K	1	..	18301b	100	3610	23.3	-34 7	6.75	7.4	F8	7	R	20670b

## THE HENRY DRAPER CATALOGUE.

59100

7<sup>h</sup> 23<sup>m</sup>.3

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	3601	23.3	-35 11	9.75	10.5	Ko	2	..	2067ob	51	1682	23.6	+13 5	8.5	9.1	Go	3	..	37891i
2	3052	23.3	-47 34	7.8	8.4	Ko	5	..	20858b	52	1683	23.6	+12 58	6.59	6.73	A5	9	..	3757oi
3	3053	23.3	-47 58	7.9	9.0	Ko	6	..	20858b	53	1819	23.6	+0 59	9.4	9.5	A3	2	..	3758oi
4	220	23.3	-81 2	8.45	8.8	A2	5	..	20557b	54	1927	23.6	-9 2	9.1	9.1	Ao	3	..	12673b
5	1439	23.4	+50 15	7.81	9.16	Ma	2	..	37515i	55	1985	23.6	-12 55	9.1	10.1	Ko	2	..	24606b
6	1773	23.4	+38 24	6.86	7.42	Go	6	0,6	37447i	56	1914	23.6	-14 38	9.1	9.1	Ao	2	..	18983b
7	1397	23.4	+27 8	8.4	9.5	K2	2	..	38172i	57	1913	23.6	-14 48	9.1	10.1	Ko	1	..	18983b
8	1633	23.4	+18 44	9.4	9.8	F5	2	..	3757oi	58	1966	23.6	-16 8	10.6	10.7	A2	2	..	24594b
9	1667	23.4	+9 51	8.67	9.67	K	2	..	37581i	59	1988	23.6	-18 4	10.4	10.4	A	2	..	24594b
10	1681	23.4	+2 29	7.5	7.5	Ao	7	..	3758oi	60	1902	23.6	-19 21	10.0	9.7	A	1	..	18288b
11	1925	23.4	-8 15	8.5	8.5	Ao	5	..	20802b	61	1953	23.6	-20 17	9.1	8.9	Ao	3	..	18301b
12	2064	23.4	-9 5	8.7	9.8	K2	2	..	44418b	62	1949	23.6	-21 40	9.1	8.5	B8	5	..	18301b
13	2059	23.4	-10 44	8.9	8.9	Ao	4	..	24606b	63	5516	23.6	-23 48	10.2	8.6	B9	3	..	18301b
14	1839	23.4	-15 11	9.40	9.16	B	3	R	24594b	64	4546	23.6	-26 2	8.9	8.4	A2	6	..	20856b
15	1840	23.4	-15 56	10.1	10.2	A2	3	..	24594b	65	4100	23.6	-27 33	9.5	8.7	B9	2	..	20856b
16	1963	23.4	-16 11	9.0	9.0	B8	3	..	18288b	66	4543	23.6	-31 29	9.0	8.8	F2	4	..	42915b
17	1964	23.4	-16 38	9.7	10.9	K5	2	..	24594b	67	3824	23.6	-33 31	11.3	9.7	Ao	2	..	2067ob
18	1986	23.4	-18 2	10.0	10.0	A	2	..	24594b	68	2841	23.6	-49 13	9.0	9.4	Go	5	..	24589b
19	4097	23.4	-27 12	8.5	8.7	Fo	2	..	20856b	69	2843	23.6	-49 29	10.2	9.7	G5	2	..	24589b
20	4028	23.4	-32 23	8.3	8.8	Ko	2	..	42915b	70	2496	23.6	-51 39	9.1	9.7	Ko	3	..	24589b
21	4031	23.4	-32 35	10.8	9.2	A	2	..	2067ob	71	447	23.6	-76 30	9.7	10.8	K2	2	..	20652b
22	3821	23.4	-33 37	10.8	9.2	Ao	3	..	2067ob	72	1324	23.7	+51 45	8.6	8.7	A3	3	..	37515i
23	R	23.4	-35 51	10.8	10.8	A	1	..	2067ob	73	1722	23.7	+42 6	7.37	8.37	Ko	7	..	37463i
24	3583	23.4	-37 54	10.3	11.4	K5	1	..	2067ob	74	1672	23.7	+41 28	8.7	9.2	F8	1	..	37463i
25	3236	23.4	-42 31	10.2	9.3	A2	4	..	20671b	75	1729	23.7	+36 59	8.6	9.2	Go	3	..	37447i
26	2838	23.4	-49 32	10.2	9.7	Ao	4	..	24589b	76	1540	23.7	+33 19	9.4	9.8	F5	2	..	37569i
27	728	23.4	-69 54	9.0	9.8	G5	2	..	15168b	77	1636	23.7	+18 18	8.7	9.0	F2	3	..	3757oi
28	2124	23.5	-6 57	7.8	8.2	F5	6	..	20802b	78	1684	23.7	+13 44	8.1	8.7	Go	3	..	3757oi
29	2061	23.5	-11 3	7.9	7.9	B9	3	..	38671i	79	1564	23.7	+12 39	7.7	8.0	F2	3	..	3757oi
30	1984	23.5	-12 30	9.7	9.7	Ao	3	..	24606b	80	1592	23.7	+11 48	7.00	8.00	Ko	4	..	3757oi
31	1841	23.5	-16 3	9.7	10.5	G5	1	..	24594b	81	1669	23.7	+8 59	9.0	9.0	Ao	2	..	37581i
32	1965	23.5	-17 0	10.2	10.3	A2	2	..	18288b	82	1739	23.7	+7 20	9.0	9.0	Ao	2	..	12755b
33	1900	23.5	-19 28	9.5	9.1	A2	4	..	18288b	83	1820	23.7	+1 33	9.0	9.8	G5	2	..	3758oi
34	1899	23.5	-19 59	8.48	9.1	K	2	..	18301b	84	2130	23.7	-5 55	9.5	10.0	F8	1	..	20802b
35	1898	23.5	-20 0	8.78	8.8	F2	4	..	18301b	85	1928	23.7	-8 44	9.7	9.7	Ao	2	..	44418b
36	1878	23.5	-22 39	5.69	5.5	B8	..	0,8	56,84	86	1954	23.7	-11 23	10.1	10.1	B8	2	..	24606b
37	5435	23.5	-24 35	8.9	8.9	G5	4	..	18301b	87	2029	23.7	-13 29	9.3	9.3	B9	3	..	24606b
38	4389	23.5	-26 49	8.0	8.0	B8	4	..	20856b	88	1915	23.7	-14 9	9.1	9.7	Go	6	0,4	24606b
39	4367	23.5	-28 6	9.3	8.7	F5	1	..	20856b	89	1851	23.7	-18 55	7.25	7.20	B8	8	..	18301b
40	3823	23.5	-33 41	7.25	8.2	G5	5	..	42915b	90	1955	23.7	-20 59	8.9	9.4	Ko	2	..	18301b
41	3603	23.5	-35 12	10.3	10.5	A2	3	..	2067ob	91	5519	23.7	-23 17	8.3	8.5	G5	5	0,2	18301b
42	3239	23.5	-42 3	8.4	9.0	K2	4	..	20671b	92	4394	23.7	-26 52	7.9	8.7	Ko	2	..	20856b
43	2839	23.5	-49 48	9.0	10.3	K5	2	..	24589b	93	4546	23.7	-31 44	10.0	8.8	B9	4	..	42915b
44	746	23.5	-67 49	8.3	8.4	A2	7	..	15223b	94	3827	23.7	-33 36	10.6	9.2	Ao	3	..	2067ob
45	106	23.5	-86 46	9.3	9.6	Fo	2	..	15145b	95	3629	23.7	-36 31	8.9	10.8	Ma	2	..	2067ob
46	973	23.6	+61 29	9.7	10.0	F	1	..	37526i	96	3319	23.7	-39 38	8.6	8.5	Ao	7	..	20671b
47	1635	23.6	+36 4	9.8	10.4	Go	1	..	37447i	97	3077	23.7	-41 25	7.9	8.1	B8	7	..	20671b
48	1400	23.6	+28 7	5.09	6.09	Ko	8	R	37569i	98	1268	23.7	-54 50	8.5	8.8	Ao	6	..	24589b
49	1743	23.6	+19 51	6.79	7.79	Ko	6	0,5	37472i	99	1237	23.7	-55 10	8.72	8.8	F5	5	..	24589b
50	1677	23.6	+14 34	7.04	7.12	A3	9	..	3757oi	100	243	23.8	+79 46	8.46	9.46	Ko	1	..	37493i

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

59200

7<sup>h</sup> 23<sup>m</sup>.8

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	380	23.8	+73 27	8.4	9.2	G5	3	..	37559i	51	1903	24.0	-19 54	9.7	9.6	Ao	2	..	18288b
2	1586	23.8	+17 5	8.3	9.1	G5	3	..	37570i	52	4401	24.0	-27 1	10.2	9.2	B8	1	..	20856b
3	1490	23.8	+16 23	7.8	7.9	A2	5	2,4	37570i	53	4105	24.0	-27 9	10.2	8.9	A	2	R	20856b
4	1593	23.8	+11 14	8.1	9.3	K5	2	..	37581i	54	4106	24.0	-27 39	9.2	9.2	K	1	..	20856b
5	1741	23.8	+7 33	9.0	9.3	Fo	2	..	37581i	55	4381	24.0	-28 16	8.1	8.7	K5	1	..	20856b
6	1731	23.8	-1 29	9.0	9.1	A3	2	..	12772b	56	4383	24.0	-28 57	5.52	5.6	B9	..	I, R	28,200
7	1962	23.8	-4 40	9.1	9.2	A2	4	..	20802b	57	3833	24.0	-33 24	8.6	9.7	K5	3	..	20670b
8	2127	23.8	-6 45	9.1	9.1	Ao	1	..	20802b	58	3832	24.0	-33 40	9.3	9.7	Ko	3	..	20670b
9	2130	23.8	-6 58	9.1	9.1	Ao	2	..	20802b	59	3236	24.0	-43 59	10.9	9.6	B9	3	..	20671b
10	1985	23.8	-7 5	9.2	9.2	B8	2	..	20802b	60	3188	24.0	-45 31	8.3	8.5	Fo	4	..	20858b
11	2069	23.8	-9 50	6.62	6.50	B5	7	..	12673b	61	2499	24.0	-51 48	9.2	9.4	Ko	4	..	24589b
12	1988	23.8	-12 45	7.9	7.9	Ao	9	..	24606b	62	1174	24.0	-52 21	9.5	10.3	G5	2	..	24589b
13	1843	23.8	-15 47	9.3	9.3	B9	3	..	24594b	63	1272	24.0	-54 22	9.2	10.3	K2	1	..	24589b
14	1967	23.8	-16 29	9.2	10.2	Ko	3	..	24594b	64	1338	24.0	-56 29	8.9	9.4	A5	3	E	24589b
15	4378	23.8	-28 10	6.80	7.0	B5	5	..	8905b	65	1731	24.1	+37 36	8.6	9.4	G5	2	..	37447i
16	3616	23.8	-34 16	11.3	10.8	A	2	..	20670b	66	1599	24.1	+31 44	8.8	8.8	Ao	3	..	37569i
17	3607	23.8	-35 42	10.3	11.0	G5	1	..	20670b	67	1598	24.1	+31 21	8.0	8.8	G5	3	..	37569i
18	3158	23.8	-40 51	8.6	7.8	Ao	8	..	20671b	68	1540	24.1	+29 24	8.0	8.8	G5	3	..	37569i
19	2761	23.8	-50 49	5.11	6.7	Ko	..	0.6	56,123	69	1730	24.1	+23 3	8.6	9.2	Go	2	..	38172i
20	1269	23.8	-54 14	9.7	10.3	G	1	..	24589b	70	1566	24.1	+12 53	8.7	8.7	Ao	2	..	37570i
21	1270	23.8	-54 17	10.0	10.0	Ao	3	..	24589b	71	1693	24.1	+3 35	7.7	7.8	A5	6	..	37580i
22	689	23.8	-66 21	9.6	9.9	Fo	3	..	15223b	72	1964	24.1	-4 53	9.2	9.2	Ao	2	..	20802b
23	1087	23.9	+59 3	9.0	9.0	Ao	3	..	37526i	73	2133	24.1	-6 29	8.9	9.5	Go	2	..	20802b
24	1699	23.9	+43 44	8.2	8.5	Fo	3	..	37463i	74	1961	24.1	-11 49	10.1	10.5	F5	2	..	24606b
25	1541	23.9	+32 55	9.4	9.9	F8	2	..	37569i	75	1960	24.1	-11 57	9.2	10.4	K5	1	..	24606b
26	1594	23.9	+11 45	8.3	8.3	Ao	4	..	37891i	76	2034	24.1	-13 29	9.1	9.4	Fo	5	..	24606b
27	1688	23.9	+6 47	6.71	7.49	G5	6	5,4	37581i	77	2035	24.1	-13 36	9.0	9.1	A3	6	..	24606b
28	1715	23.9	+4 1	7.9	8.7	G5	3	..	37580i	78	1969	24.1	-16 21	8.7	9.0	Fo	4	..	18288b
29	1821	23.9	+1 43	8.1	8.9	G5	4	..	37580i	79	5531	24.1	-23 57	8.5	8.0	B9	5	..	18301b
30	1912	23.9	-3 38	7.7	8.9	K5	4	..	44418b	80	4404	24.1	-26 13	8.3	8.1	Ao	5	..	20856b
31	1957	23.9	-11 29	10.6	10.6	Ao	1	..	24606b	81	4108	24.1	-27 12	8.3	8.0	B5	5	..	20856b
32	1956	23.9	-12 4	10.4	10.5	A2	2	..	24606b	82	4549	24.1	-30 19	10.7	9.4	Ao	2	..	42915b
33	1844	23.9	-15 21	9.7	10.9	K5	1	..	24594b	83	4558	24.1	-31 44	9.2	9.1	Ko	2	..	42915b
34	5524	23.9	-23 19	9.5	9.4	K	1	..	18301b	84	3591	24.1	-37 20	9.7	9.6	B9	5	..	20670b
35	4399	23.9	-26 38	6.53	8.1	K5	6	3,4	20856b	85	3388	24.1	-38 7	10.1	10.5	F	2	..	20670b
36	3386	23.9	-38 53	8.7	8.7	Ko	4	..	20671b	86	3322	24.1	-39 36	8.3	8.7	Fo	7	..	20671b
37	3245	23.9	-42 59	8.2	9.0	K2	5	..	20671b	87	2501	24.1	-51 5	10.0	9.7	Ao	3	..	24589b
38	3235	23.9	-43 31	10.2	10.5	G5	2	..	20671b	88	1274	24.1	-54 27	9.4	9.8	F5	3	..	24589b
39	638	23.9	-70 26	7.4	8.4	Ko	8	..	15168b	89	570	24.1	-71 46	8.3	8.6	Fo	4	..	15168b
40	442	23.9	-75 58	9.8	10.8	Ko	1	..	20652b	90	1878	24.2	+40 34	8.5	9.6	K2	1	..	37463i
41	1876	24.0	+40 40	8.8	9.4	Go	3	..	37463i	91	1623	24.2	+33 55	9.5	9.6	A2	2	..	37569i
42	1587	24.0	+17 35	8.3	8.4	A2	4	1,2-	37570i	92	1640	24.2	+18 51	7.7	7.8	A2	4	..	37570i
43	1731	24.0	-0 39	9.0	9.1	A3	3	..	12772b	93	1641	24.2	+18 51	8.3	8.7	F5	1	..	37472i
44	1732	24.0	-1 37	9.0	9.1	A2	2	..	12772b	94	1567	24.2	+12 13	4.85	5.85	Ko	..	0,10	56,84
45	1989	24.0	-8 3	8.7	9.5	G5	2	..	20802b	95	1785	24.2	+8 3	7.52	8.52	Ko	4	..	37581i
46	1931	24.0	-8 59	9.2	9.6	F5	3	..	44418b	96	1690	24.2	+6 52	8.3	9.4	K2	1	..	12755b
47	2070	24.0	-9 6	9.7	9.7	Ao	3	..	44418b	97	..	24.2	-18 7	..	..	Ao	2	..	24594b
48	1919	24.0	-14 45	9.2	9.2	Ao	2	..	18983b	98	5448	24.2	-24 55	8.80	8.9	Ko	4	..	18301b
49	1989	24.0	-17 7	9.3	10.4	K2	1	..	18288b	99	4423	24.2	-29 25	8.5	8.2	B9	6	..	42915b
50	1853	24.0	-18 39	9.2	9.5	Fo	3	..	18288b	100	3836	24.2	-33 18	10.8	9.7	Ao	3	..	20670b



## THE HENRY DRAPER CATALOGUE.

59300

7<sup>h</sup> 24<sup>m</sup>.2

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	3619	24.2	-34 41	9.7	9.6	F5	4	3,3	2067ob	51	3639	24.4	-36 48	9.3	10.2	Ko	3	..	2067ob
2	3323	24.2	-39 12	9.3	9.3	A2	3	..	20671b	52	3164	24.4	-40 20	8.6	9.1	A2	4	..	20671b
3	3161	24.2	-40 44	8.9	9.6	Ko	2	..	20671b	53	3163	24.4	-40 50	8.7	9.4	Go	2	..	20671b
4	3166	24.2	-46 4	9.0	9.0	F2	3	..	20858b	54	3084	24.4	-41 57	10.1	9.3	Fo	3	..	20671b
5	1340	24.2	-56 45	8.1	8.8	F5	3	..	12757b	55	3250	24.4	-42 49	10.2	9.8	A2	2	..	20671b
6	749	24.2	-67 30	8.9	10.1	K5	3	..	15223b	56	3433	24.4	-44 5	8.4	9.0	Ao	6	..	20671b
7	1045	24.3	+58 45	8.7	9.0	F2	3	..	37526i	57	2769	24.4	-50 39	10.2	10.0	Ao	3	..	24589b
8	1441	24.3	+50 21	8.0	8.0	Ao	5	..	37515i	58	1341	24.4	-56 17	8.4	8.8	Ao	3	..	12757b
9	1686	24.3	+13 9	9.4	9.7	F	1	..	3757oi	59	..	24.4	-77 53	..	..	Ko	1	..	20652b
10	1680	24.3	+5 44	9.4	9.5	A3	2	..	12755b	60	1822	24.5	+20 2	7.10	7.66	Go	6	0,5	37472i
11	1738	24.3	-1 42	5.80	6.87	K2	6	2,6	1856ob	61	2144	24.5	-3 1	9.2	9.2	Ao	2	..	20802b
12	2143	24.3	-2 56	9.3	9.3	Ao	3	..	20802b	62	..	24.5	-15 20	..	..	A	1	..	24594b
13	1965	24.3	-4 20	7.7	8.7	Ko	6	..	20802b	63	1856	24.5	-18 35	9.2	10.2	Ko	1	..	18288b
14	1995	24.3	-7 49	8.5	8.5	B8	2	..	20802b	64	4419	24.5	-26 17	8.7	8.7	B9	3	..	20856b
15	1962	24.3	-11 53	9.1	9.1	Ao	4	..	24606b	65	4392	24.5	-28 28	8.9	8.9	G5	1	..	20856b
16	2037	24.3	-13 59	9.7	9.8	A2	3	..	24594b	66	4048	24.5	-32 30	9.9	8.8	A	3	..	42915b
17	1847	24.3	-15 9	9.7	9.8	A2	2	..	24594b	67	3434	24.5	-44 37	8.4	9.3	Ko	2	..	20786b
18	1849	24.3	-15 50	9.7	9.7	Ao	2	..	24594b	68	3068	24.5	-47 35	7.9	8.2	A5	7	..	20858b
19	1955	24.3	-21 45	8.7	7.9	B8	6	..	18301b	69	1338	24.5	-53 23	9.5	10.3	G5	2	..	24589b
20	5535	24.3	-23 8	8.9	8.9	Ko	3	..	18301b	70	1277	24.5	-55 2	8.32	8.3	Ao	7	..	24589b
21	4413	24.3	-27 2	9.7	8.6	Ao	2	..	20856b	71	1725	24.6	+42 51	7.75	8.93	K5	3	..	37463i
22	4386	24.3	-28 28	8.29	8.4	Ko	3	..	20856b	72	1519	24.6	+30 47	8.5	8.5	Ao	4	..	37569i
23	4425	24.3	-29 35	9.5	8.6	A2	4	..	42915b	73	1734	24.6	+23 10	8.7	8.7	Ao	2	..	38172i
24	2767	24.3	-50 56	9.4	10.3	K5	2	..	24589b	74	1749	24.6	+19 11	8.5	9.1	Go	2	..	3757oi
25	2768	24.3	-50 59	10.2	10.0	B8	2	..	24589b	75	1547	24.6	+10 16	7.7	9.1	Ma	3	..	37581i
26	1176	24.3	-52 53	10.0	10.6	Go	2	..	24589b	76	1786	24.6	+8 28	9.4	9.7	F	1	..	37581i
27	642	24.3	-70 22	9.5	9.5	Ao	3	..	15168b	77	1961	24.6	+0 46	8.04	8.32	Fo	5	..	3758oi
28	448	24.3	-76 7	10.1	10.2	A3	3	..	20652b	78	1967	24.6	-4 49	8.7	8.8	A2	5	..	20802b
29	1440	24.4	+45 33	8.4	8.5	A2	3	..	37501i	79	2137	24.6	-5 23	8.7	8.7	B9	5	..	20802b
30	1441	24.4	+45 20	8.1	8.9	G5	2	..	37501i	80	1996	24.6	-7 21	5.99	6.49	F8	10	..	20802b
31	1405	24.4	+28 7	8.0	8.4	F5	4	..	37569i	81	2067	24.6	-10 7	6.00	7.07	K2	5	..	12673b
32	1689	24.4	+25 39	8.4	9.5	K2	1	..	38172i	82	..	24.6	-11 44	..	..	Ao	2	..	24606b
33	1614	24.4	+21 0	7.40	7.40	Ao	6	2,7	37472i	83	1964	24.6	-11 51	9.1	9.1	Ao	6	..	24606b
34	..	24.4	-4 5	var.	var.	Md	..	R	M	84	1990	24.6	-12 37	9.1	9.1	Ao	4	..	24606b
35	2135	24.4	-5 49	9.7	9.8	A5	1	..	20802b	85	1850	24.6	-15 13	10.6	10.6	Ao	1	..	24594b
36	2136	24.4	-5 50	9.5	9.8	Fo	1	..	20802b	86	1857	24.6	-18 16	9.2	9.2	B9	3	..	18288b
37	1963	24.4	-12 1	10.2	11.4	K5	1	..	24606b	87	..	24.6	-18 54	..	..	Ao	2	..	18288b
38	1989	24.4	-12 8	9.0	9.0	Ao	6	..	24606b	88	1909	24.6	-19 37	9.1	9.6	Ko	1	..	18288b
39	2038	24.4	-13 17	10.0	10.0	Ao	3	..	24606b	89	1908	24.6	-19 57	8.43	8.2	B9	5	..	18301b
40	..	24.4	-16 4	..	..	A2	1	..	24594b	90	1889	24.6	-22 57	8.7	7.9	B9	3	..	42935b
41	..	24.4	-18 9	..	..	Ao	1	..	24594b	91	4576	24.6	-31 56	10.4	8.9	A	4	..	42915b
42	1855	24.4	-18 41	9.5	9.6	A2	3	..	18288b	92	3596	24.6	-37 47	10.3	10.2	F5	3	..	2067ob
43	1961	24.4	-20 26	9.0	8.5	B9	4	..	18301b	93	3333	24.6	-39 50	8.4	9.1	Ko	3	..	20671b
44	1956	24.4	-21 35	7.7	8.6	Ko	5	..	18301b	94	2770	24.6	-50 21	9.0	9.7	K2	3	..	24589b
45	5456	24.4	-24 7	10.2	8.9	A2	3	..	18301b	95	1178	24.6	-52 7	8.1	8.5	A5	7	..	24589b
46	4415	24.4	-27 1	10.2	8.4	B8	2	..	20856b	96	1179	24.6	-52 53	9.6	10.6	Ko	2	..	24589b
47	4391	24.4	-28 52	8.5	8.4	A3	4	..	42915b	97	443	24.6	-75 9	8.78	8.7	A3	7	..	20652b
48	4426	24.4	-29 56	9.7	9.1	A3	3	..	42915b	98	306	24.6	-77 40	9.8	10.3	F8	3	..	20652b
49	4047	24.4	-32 16	9.9	8.9	A	3	..	42915b	99	1589	24.7	+17 9	9.0	9.0	A	1	..	3757oi
50	3624	24.4	-34 17	11.3	10.5	Ao	2	..	2067ob	100	1685	24.7	+5 31	9.2	9.2	Ao	2	..	12755b



## ANNALS OF HARVARD COLLEGE OBSERVATORY.

59400

7<sup>h</sup> 24<sup>m</sup>.7

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
		m.	° ' "									m.	° ' "						
1	1734	24.7	- 0 47	8.5	8.6	A5	3	..	12772b	51	1549	24.9	+10 6	8.32	8.32	A0	4	..	37581i
2	2137	24.7	- 6 29	9.0	9.4	F5	2	..	20802b	52	1691	24.9	+ 6 14	8.4	8.8	F5	3	..	12755b
3	1965	24.7	-11 27	9.7	9.7	A0	2	..	24606b	53	1693	24.9	+ 5 58	9.4	9.4	A0	3	..	12755b
4	1991	24.7	-12 55	7.26	8.26	K0	8	..	24606b	54	1919	24.9	- 3 46	9.1	9.2	A2	3	..	20802b
5	1923	24.7	-14 50	8.7	8.7	A0	3	..	18983b	55	1938	24.9	- 8 43	9.1	9.2	A2	2	..	12673b
6	1851	24.7	-15 56	8.7	8.8	A5	6	5,2	18288b	56	1967	24.9	-11 9	9.0	9.0	A0	3	..	44418b
7	1993	24.7	-17 18	9.2	9.2	B9	4	..	18288b	57	1966	24.9	-11 37	9.5	10.7	K5	1	..	24606b
8	1858	24.7	-18 40	7.15	8.15	K0	7	0,2	18301b	58	2044	24.9	-13 16	8.7	9.8	K2	4	..	24606b
9	1957	24.7	-21 11	9.1	8.5	B8	4	..	18301b	59	1926	24.9	-14 57	9.56	9.84	F0	2	..	24594b
10	4120	24.7	-27 42	8.7	8.6	Go	3	..	20856b	60	1860	24.9	-18 9	10.4	11.4	K0	2	..	24594b
11	4402	24.7	-28 55	6.82	8.0	K0	8	..	42915b	61	1861	24.9	-18 34	10.6	10.6	A0	1	..	18288b
12	4563	24.7	-30 48	9.7	9.2	F5	2	..	42915b	62	1959	24.9	-21 37	8.9	8.2	B9	6	..	18301b
13	3843	24.7	-33 4	9.2	8.8	A0	5	..	20670b	63	4442	24.9	-29 18	8.3	8.5	A5	6	..	42915b
14	3844	24.7	-33 17	9.2	9.2	K2	3	..	20670b	64	3631	24.9	-34 8	10.8	9.9	A0	4	..	20670b
15	3627	24.7	-34 21	10.3	9.6	B9	5	0,2	20670b	65	3647	24.9	-36 43	9.5	10.5	K0	2	..	20670b
16	3618	24.7	-35 3	7.44	7.9	A3	8	..	42915b	66	3601	24.9	-37 36	6.46	7.0	A0	9	..	42928b
17	3392	24.7	-39 0	8.9	9.0	A3	3	..	20671b	67	3091	24.9	-41 19	7.9	8.5	K0	5	..	20671b
18	3088	24.7	-41 8	8.9	9.4	A3	3	..	20671b	68	2507	24.9	-51 12	6.86	7.6	G5	3	..	8951b
19	3255	24.7	-42 13	8.6	8.4	A2	7	..	20671b	69	1184	24.9	-52 4	9.5	10.3	G5	1	..	24589b
20	3243	24.7	-43 56	9.0	9.6	K2	3	..	20671b	70	445	24.9	-73 44	8.7	9.0	F2	7	..	20652b
21	3172	24.7	-46 53	8.6	8.2	B5	4	..	20858b	71	444	24.9	-75 45	9.6	10.8	K5	2	..	20652b
22	2854	24.7	-49 7	10.2	10.2	A	1	..	24589b	72	1544	25.0	+29 26	8.2	9.0	G5	2	..	37569i
23	2853	24.7	-49 29	9.6	9.7	A0	4	..	24589b	73	1789	25.0	+ 7 56	7.58	7.72	A5	5	2,4	37581i
24	2771	24.7	-50 9	9.0	10.0	K5	2	..	24589b	74	1920	25.0	- 3 33	9.1	9.9	G5	2	..	20802b
25	1181	24.7	-52 24	9.1	9.1	B9	5	..	24589b	75	2001	25.0	- 7 40	8.7	8.7	A0	4	..	20802b
26	644	24.7	-70 34	8.3	8.3	B9	7	..	15168b	76	1941	25.0	- 8 54	9.5	9.6	A2	3	..	44418b
27	1675	24.8	+41 41	8.0	8.1	A2	6	..	37463i	77	1993	25.0	-12 18	9.0	9.0	A0	5	..	24606b
28	1520	24.8	+30 47	8.6	9.0	F5	2	..	37569i	78	1856	25.0	-16 4	8.4	8.7	F2	5	3,2	18288b
29	1543	24.8	+29 0	8.6	9.0	F5	2	..	37569i	79	1997	25.0	-17 24	9.7	9.7	B9	2	..	18288b
30	1823	24.8	+20 44	7.06	7.06	A0	6	0,7	37472i	80	4431	25.0	-26 47	8.9	8.4	B9	3	..	20856b
31	1824	24.8	+20 9	9.0	9.0	A	3	E	37570i	81	3620	25.0	-35 30	9.3	9.4	A0	4	..	42915b
32	1681	24.8	+14 5	7.5	7.9	F5	6	..	37570i	82	3648	25.0	-36 59	10.3	11.3	K0	2	..	20670b
33	1824	24.8	+ 1 49	8.7	9.7	K0	2	..	12755b	83	3443	25.0	-44 27	10.5	9.9	Go	2	..	20671b
34	1970	24.8	- 4 59	8.10	8.18	A3	7	..	20802b	84	2508	25.0	-51 9	9.1	8.8	B8	7	..	24589b
35	1937	24.8	- 9 3	7.9	8.0	A5	4	..	12673b	85	1341	25.0	-53 16	10.5	10.5	A	1	R	24589b
36	1992	24.8	-12 29	9.3	9.3	A0	3	..	24606b	86	1240	25.0	-55 38	8.6	8.6	F0	7	..	24589b
37	1924	24.8	-14 6	9.2	9.2	A0	1	..	18983b	87	1239	25.0	-56 3	8.9	9.4	F2	3	..	24589b
38	1925	24.8	-14 47	5.94	6.44	F8	6	0,9	2399b	88	1046	25.1	+58 2	9.2	10.0	G5	2	..	37526i
39	1853	24.8	-15 51	8.7	8.8	A5	4	0,2	18288b	89	1879	25.1	+40 40	8.7	9.7	K0	1	..	37463i
40	1973	24.8	-16 46	8.7	8.7	B8	7	1,1	18288b	90	1746	25.1	+ 6 56	8.3	8.9	G	2	..	37581i
41	1996	24.8	-17 8	7.32	7.88	Go	3	0,9	8903b	91	1825	25.1	+ 0 55	8.79	8.79	A0	3	..	37580i
42	1859	24.8	-18 40	9.3	9.3	B9	2	..	18288b	92	1973	25.1	- 4 38	9.1	9.1	A0	5	..	20802b
43	1910	24.8	-19 22	10.0	9.4	A0	2	..	18288b	93	1855	25.1	-15 11	10.0	10.5	F8	3	..	24594b
44	1966	24.8	-20 40	9.2	9.1	F5	2	..	18301b	94	1998	25.1	-17 22	8.7	10.1	Ma	4	..	18288b
45	3845	24.8	-33 50	10.8	9.1	A0	3	..	20670b	95	1862	25.1	-18 18	9.5	9.6	A2	2	..	18288b
46	3072	24.8	-47 13	7.6	7.8	B3	8	..	20858b	96	1912	25.1	-19 9	8.9	9.2	K2	3	..	18288b
47	757	24.8	-65 44	9.8	9.9	A2	4	..	15223b	97	1962	25.1	-21 38	8.4	7.9	B3	7	..	18301b
48	591	24.8	-72 49	9.7	10.0	F2	3	..	15168b	98	1960	25.1	-21 39	8.1	8.0	B8	6	..	18301b
49	1726	24.9	+42 34	9.5	9.8	F	1	..	37463i	99	4590	25.1	-31 38	6.51	5.5	B3	10	R	8905b
50	1683	24.9	+14 3	8.3	8.8	F8	3	..	37570i	100		25.1	-31 39	7.24					

## THE HENRY DRAPER CATALOGUE.

59500

7<sup>h</sup> 25<sup>m</sup>.1

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	3206	25.1	-45 9	9.30	9.7	Ao	2	..	20786b	51	3397	25.3	-38 11	9.3	9.1	Ao	5	..	20670b
2	3179	25.1	-46 54	7.8	8.7	Ko	5	..	20858b	52	1280	25.3	-54 5	9.1	10.3	K5	2	..	24589b
3	446	25.1	-73 55	9.4	10.4	Ko	3	..	20652b	53	309	25.3	-77 40	10.0	11.0	Ko	1	..	20652b
4	233	25.2	+80 47	8.47	8.97	F8	3	..	38331i	54	511	25.4	+66 35	8.7	9.9	K5	2	..	37713i
5	976	25.2	+61 33	9.2	10.0	G5	2	..	37526i	55	1277	25.4	+46 45	8.0	8.8	G5	4	..	37501i
6	1061	25.2	+60 15	8.01	9.01	Ko	5	5,3	37526i	56	1639	25.4	+36 45	8.5	9.3	G5	3	..	37447i
7	1958	25.2	+39 6	6.46	6.46	Ao	8	..	37463i	57	1635	25.4	+35 49	7.16	8.34	K5	5	..	37569i
8	1775	25.2	+38 43	9.0	9.0	A	1	E	37463i	58	1543	25.4	+33 25	9.1	10.1	K	1	..	37569i
9	1403	25.2	+27 50	8.1	8.6	F8	3	..	37569i	59	1546	25.4	+29 3	8.8	9.6	G5	1	..	37569i
10	1825	25.2	+20 37	8.6	8.7	A2	5	3,4	37472i	60	1706	25.4	+22 30	8.6	9.4	G5	2	..	37472i
11	1685	25.2	+ 2 29	7.03	8.03	Ko	5	..	37580i	61	1495	25.4	+16 50	8.5	9.5	Ko	1	..	37570i
12	1976	25.2	- 4 22	8.9	10.0	K2	2	..	20802b	62	1680	25.4	+ 9 49	8.92	10.10	K5	..	..	M
13	1975	25.2	- 4 44	9.1	10.3	K5	2	..	44418b	63	1722	25.4	+ 4 46	7.95	8.95	Ko	3	..	37580i
14	2002	25.2	- 7 32	8.7	8.7	Ao	5	..	20802b	64	1723	25.4	+ 4 12	8.3	9.1	G5	2	..	37580i
15	1969	25.2	-11 53	10.0	10.8	G5	2	..	24606b	65	1702	25.4	+ 3 32	9.0	9.0	B9	3	..	37580i
16	1970	25.2	-12 5	10.1	10.1	Ao	3	..	24606b	66	1971	25.4	-11 36	10.0	10.0	Ao	3	..	24606b
17	1857	25.2	-15 11	9.5	10.1	Go	5	..	24594b	67	1972	25.4	-11 50	9.7	9.7	Ao	3	..	24606b
18	1909	25.2	-17 17	9.1	10.3	K5	2	..	18288b	68	1929	25.4	-14 8	9.7	9.7	Ao	3	..	24594b
19	1863	25.2	-18 15	9.1	9.1	Ao	4	..	18288b	69	1976	25.4	-16 13	10.1	11.1	Ko	1	..	24594b
20	1864	25.2	-19 1	9.3	9.3	B9	2	..	18288b	70	2000	25.4	-17 19	8.7	9.7	Ko	4	..	18288b
21	1913	25.2	-19 44	10.0	9.6	A2	2	..	18288b	71	2001	25.4	-17 57	10.4	10.4	A	3	..	24594b
22	1969	25.2	-20 6	9.13	8.9	B9	3	..	18301b	72	4458	25.4	-29 59	9.95	9.4	A	2	..	42915b
23	1965	25.2	-21 58	9.0	8.5	Ao	4	0,3	18288b	73	4579	25.4	-30 26	7.9	8.9	K5	3	..	42915b
24	5563	25.2	-23 19	10.0	8.5	Ao	4	..	18301b	74	3625	25.4	-35 10	10.8	9.9	Ao	3	..	20670b
25	5565	25.2	-23 43	9.5	8.5	A	4	..	18301b	75	3099	25.4	-41 38	8.3	9.8	K2	3	..	20671b
26	4436	25.2	-26 27	9.3	8.7	Ao	2	..	20856b	76	2512	25.4	-51 53	9.1	7.9	Ao	8	..	24589b
27	3634	25.2	-34 43	6.84	7.0	B8	4	..	11110b	77	1281	25.4	-54 46	10.3	10.3	A	1	..	24589b
28	3649	25.2	-36 11	9.5	10.2	Go	3	..	20670b	78	1241	25.4	-55 12	8.55	8.9	A2	5	..	24589b
29	3336	25.2	-39 15	8.3	8.5	G5	5	..	20671b	79	829	25.4	-59 22	7.4	8.9	Ko	3	0,3	15516b
30	3250	25.2	-43 45	7.8	7.3	B9	10	..	20671b	80	308	25.4	-77 25	10.1	10.7	Go	2	..	20652b
31	2510	25.2	-51 12	10.9	10.0	A2	2	..	24589b	81	576	25.5	+65 54	8.6	9.2	Go	4	..	37713i
32	839	25.2	-60 47	8.4	9.7	Ko	2	..	12757b	82	1684	25.5	+14 50	9.7	10.9	K5	1	..	37570i
33	758	25.2	-65 7	9.29	9.3	A2	4	..	15223b	83	1574	25.5	+12 28	8.5	8.5	Ao	4	..	37570i
34	759	25.2	-65 21	9.5	9.8	F2	3	..	15223b	84	1553	25.5	+10 2	8.72	8.72	Ao	2	..	37581i
35	1444	25.3	+44 56	8.67	8.81	A5	3	..	37463i	85	1724	25.5	+ 4 35	8.3	8.3	Ao	4	..	12755b
36	1750	25.3	+19 12	9.2	9.2	A	1	..	37570i	86	1703	25.5	+ 3 9	9.2	9.8	Go	2	..	12755b
37	1696	25.3	+ 6 2	8.3	8.4	A3	2	..	37581i	87	2144	25.5	- 6 45	8.5	8.9	F5	5	..	20802b
38	1688	25.3	+ 5 28	7.5	7.5	B9	7	..	37580i	88	1945	25.5	- 8 50	9.1	9.2	A2	2	..	12673b
39	1701	25.3	+ 3 30	7.7	8.8	K2	5	..	37580i	89	1862	25.5	-15 35	9.0	10.0	Ko	3	..	24594b
40	2141	25.3	- 6 27	9.1	10.1	Ko	1	..	20802b	90	2004	25.5	-17 47	8.6	9.4	G5	3	..	18288b
41	1944	25.3	- 8 19	7.9	8.3	F5	5	0,8	12673b	91	5476	25.5	-24 16	9.2	8.9	B8	3	..	18301b
42	1994	25.3	-12 9	8.7	9.1	F5	5	..	24606b	92	4422	25.5	-28 32	9.3	8.4	Ao	2	..	20856b
43	2051	25.3	-13 46	6.94	6.82	B5	4	4,7	38671i	93	4063	25.5	-32 33	8.6	9.1	K2	3	..	42915b
44	1928	25.3	-14 9	7.5	7.8	Fo	5	0,2	18983b	94	3857	25.5	-33 58	7.16	7.3	A2	7	..	42915b
45	1927	25.3	-14 56	10.0	10.0	Ao	3	..	24594b	95	1242	25.5	-55 54	9.3	9.7	F5	2	..	24589b
46	1858	25.3	-15 31	9.2	9.2	Ao	4	..	24594b	96	718	25.6	+63 23	8.0	9.0	Ko	4	..	37526i
47	1865	25.3	-18 13	10.4	11.5	K2	1	..	24594b	97	1047	25.6	+57 56	9.0	9.5	F8	2	..	37526i
48	1915	25.3	-19 19	8.4	8.5	B9	4	..	18301b	98	1641	25.6	+36 22	8.1	9.1	Ko	3	..	37447i
49	5568	25.3	-23 44	9.7	8.5	A	4	..	18301b	99	1580	25.6	+26 1	8.6	9.6	Ko	2	..	38172i
50	4593	25.3	-31 15	5.80	5.63	B3	..	..	28,200	100	1683	25.6	+24 14	8.0	9.0	Ko	4	..	38172i

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

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7<sup>h</sup> 25<sup>m</sup>.6

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1497	25.6	+16 31	9.0	9.6	Go	2	..	3757oi	51	5584	25.8	-23 36	8.9	8.5	G5	5	..	18301b
2	1587	25.6	+15 28	8.4	9.4	Ko	1	..	3757oi	52	5487	25.8	-24 56	7.27	7.7	A3	5	..	42935b
3	1598	25.6	+11 25	6.58	7.58	Ko	..	0,6-	56,84	53	4471	25.8	-29 59	9.10	8.9	Ao	4	..	42915b
4	1791	25.6	+ 8 46	7.16	7.22	A2	7	R	3758ii	54	4612	25.8	-31 57	8.9	8.8	Fo	4	..	42915b
5	1700	25.6	+ 8 46	8.3	9.3	G	3	..	12755b	55	4070	25.8	-32 12	8.9	8.9	F2	3	..	42915b
6	1689	25.6	+ 5 27	8.5	8.5	B8	6	..	12755b	56	3612	25.8	-37 4	9.3	10.8	K5	2	..	20670b
7	1689	25.6	+ 5 27	8.5	8.5	B8	6	..	12755b	57	3269	25.8	-42 57	9.1	9.4	G5	3	..	20671b
8	1930	25.6	-14 16	10.0	10.3	Fo	2	..	24594b	58	3257	25.8	-43 56	10.9	10.2	G5	2	..	20671b
9	1863	25.6	-15 39	9.3	10.4	K2	2	..	24594b	59	2974	25.8	-48 57	9.4	9.2	F5	5	..	24589b
10	1919	25.6	-19 19	6.99	8.3	Ko	7	..	18301b	60	2516	25.8	-51 52	10.9	9.7	Ao	3	..	24589b
11	1971	25.6	-20 35	8.9	9.2	G5	2	..	18301b	61	1283	25.8	-54 53	10.2	10.3	A2	2	..	24589b
12	1897	25.6	-22 49	4.80	4.88	A3	..	0,R	56,84	62	1244	25.8	-55 57	10.0	10.0	Ao	2	..	24589b
13	5579	25.6	-23 29	8.7	8.9	G5	4	..	18301b	63	648	25.8	-70 12	8.08	9.5	Ko	6	..	15168b
14	5580	25.6	-23 48	9.7	8.9	Ao	3	..	18301b	64	191	25.9	+83 18	7.99	8.99	Ko	4	..	37546i
15	3858	25.6	-33 25	9.9	9.2	F	2	..	20670b	65	1702	25.9	+43 16	9.0	10.2	K5	1	..	37463i
16	3627	25.6	-35 11	9.3	10.5	K5	1	..	20670b	66	1544	25.9	+33 44	8.6	9.4	G5	3	..	37569i
17	3100	25.6	-41 49	9.3	9.0	A2	5	..	20671b	67	1606	25.9	+31 19	8.4	9.4	Ko	3	..	37569i
18	2971	25.6	-48 36	8.0	7.6	B8	7	..	20786b	68	1405	25.9	+27 20	9.1	9.5	F5	3	..	38172i
19	2861	25.6	-49 19	9.0	9.3	Fo	7	..	24589b	69	1979	25.9	- 5 1	6.38	7.38	Ko	7	..	20802b
20	1243	25.6	-55 46	9.1	10.0	K2	2	..	24589b	70	2146	25.9	- 6 30	7.9	8.0	A2	6	..	20802b
21	1062	25.7	+60 3	8.21	9.21	Ko	3	5,2	37526i	71	1948	25.9	- 8 51	7.8	8.8	Ko	3	..	12673b
22	1737	25.7	+23 53	8.4	8.7	Fo	3	..	38172i	72	1981	25.9	-16 34	9.3	10.1	G5	2	..	24594b
23	1695	25.7	+12 59	8.5	8.5	Ao	4	..	3757oi	73	2005	25.9	-17 9	9.1	9.1	Ao	3	..	18288b
24	1554	25.7	+10 19	8.5	8.5	Ao	4	..	3758ii	74	1867	25.9	-18 13	8.3	8.3	B9	4	0,5	18983b
25	1740	25.7	- 0 53	8.3	8.3	Ao	3	..	3758oi	75	3658	25.9	-36 29	7.5	8.7	Ma	4	..	42915b
26	2082	25.7	- 9 29	8.9	9.0	A2	1	..	12673b	76	3177	25.9	-40 14	9.3	9.8	Ko	2	..	20670b
27	2083	25.7	- 9 55	9.2	10.0	G5	2	..	44418b	77	3104	25.9	-41 41	9.5	9.4	Go	3	..	20671b
28	1931	25.7	-14 22	10.4	10.5	A2	3	..	24594b	78	3220	25.9	-45 57	8.5	8.2	F2	4	..	20858b
29	1865	25.7	-15 38	8.4	8.4	Ao	5	0,1	18983b	79	1344	25.9	-53 5	9.7	9.7	Ao	3	..	24589b
30	1979	25.7	-16 11	10.5	10.5	B9	2	..	24594b	80	733	25.9	-69 10	9.9	10.7	G5	1	..	15223b
31	1978	25.7	-16 51	7.7	8.7	Ko	6	0,1	18288b	81	594	25.9	-72 7	8.9	9.9	Ko	3	..	15168b
32	4597	25.7	-25 52	9.7	8.7	Fo	2	..	20856b	82	1881	26.0	+40 4	8.82	9.60	G5	1	..	37463i
33	4468	25.7	-30 3	9.40	9.7	K2	1	..	42915b	83	1962	26.0	+39 15	8.6	9.0	F5	1	..	37463i
34	3609	25.7	-37 36	10.6	10.5	F5	2	..	20670b	84	1406	26.0	+27 21	8.0	9.0	Ko	4	5,4	38172i
35	3400	25.7	-38 36	5.41	5.36	B8	..	3,5 R	56,123	85	1687	26.0	+24 11	8.2	9.3	K2	3	..	38172i
36	1187	25.7	-53 2	9.2	10.2	Ko	3	..	24589b	86	1596	26.0	+17 18	5.64	6.64	Ko	8	0,9	37472i
37	1342	25.7	-53 17	9.4	10.0	Go	3	..	24589b	87	1704	26.0	+ 3 4	8.1	8.2	A3	3	..	3758oi
38	1346	25.7	-56 25	9.2	10.3	K2	1	..	24589b	88	1688	26.0	+ 2 23	7.5	8.1	Go	7	..	3758oi
39	693	25.7	-66 15	9.2	10.4	K5	1	..	15223b	89	1973	26.0	+ 0 23	8.4	8.4	B9	2	..	3758oi
40	574	25.7	-71 16	6.52	7.0	A2	5	..	9003b	90	1745	26.0	- 1 57	7.17	7.95	G5	4	..	3758oi
41	284	25.8	+76 0	7.82	8.24	F5	6	..	37559i	91	1928	26.0	- 3 26	9.2	9.3	A3	2	..	20802b
42	1083	25.8	+57 29	7.6	8.6	Ko	4	..	37526i	92	2084	26.0	- 9 5	7.7	7.7	Ao	6	..	12673b
43	1686	25.8	+24 44	8.2	..	R8	..	..	M	93	2085	26.0	- 9 34	var.	var.	G5	7	R	12673b
44	1690	25.8	+ 5 11	8.3	9.4	K2	1	..	12755b	94	2058	26.0	-13 13	8.6	8.7	A3	2	..	12673b
45	1971	25.8	+ 0 22	7.7	7.7	Ao	6	..	3758oi	95	1934	26.0	-14 29	9.5	9.8	F2	2	..	24594b
46	2007	25.8	- 7 50	8.3	9.5	K5	1	..	20802b	96	..	26.0	-14 42	..	..	Ao	1	..	24594b
47	1932	25.8	-14 47	8.1	8.1	B8	5	..	18983b	97	1935	26.0	-14 45	10.0	10.4	F5	2	..	24594b
48	1980	25.8	-16 8	10.0	10.0	B9	3	..	24594b	98	1867	26.0	-15 39	10.0	10.8	G5	1	..	24594b
49	1866	25.8	-18 39	10.2	11.0	G5	2	..	24594b	99	..	26.0	-15 51	..	..	Ao	2	..	24594b
50	1973	25.8	-20 16	10.2	9.7	Ao	2	..	18288b	100	2006	26.0	-17 6	8.6	8.6	B9	7	1,1	18288b

## THE HENRY DRAPER CATALOGUE.

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7<sup>h</sup> 26<sup>m</sup>.0

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1902	m. 26.0	° 23 4	8.3	8.0	Ao	5	..	18301b	51	1952	m. 26.3	° 8 35	9.7	9.7	Ao	2	R	44418b
2	5586	26.0	23 17	9.5	8.5	A5	4	..	18301b	52	1869	26.3	15 13	9.20	9.18	B9	2	..	18983b
3	4428	26.0	28 43	8.9	8.3	Fo	3	..	20856b	53	1871	26.3	18 33	9.7	10.5	G5	2	..	24594b
4	3616	26.0	37 55	7.55	7.9	F8	9	0,9-	18435b	54	1977	26.3	21 23	9.0	8.8	Fo	4	..	18301b
5	3271	26.0	42 15	11.5	10.1	Fo	2	..	20671b	55	4438	26.3	28 27	8.9	8.4	F5	2	..	20856b
6	2783	26.0	50 11	11.5	10.3	G	1	..	24589b	56	4081	26.3	32 8	9.3	8.5	B5	4	..	42915b
7	1590	26.1	+15 19	9.4	9.4	A	1	..	37570i	57	4082	26.3	32 52	9.7	8.5	Ao	4	..	42915b
8	1729	26.1	+4 49	8.45	8.51	A2	3	..	37580i	58	3624	26.3	37 52	11.0	10.5	Ao	2	..	20670b
9	1975	26.1	-0 2	8.53	8.95	F5	2	..	37580i	59	3406	26.3	38 15	10.8	10.2	A2	2	..	20670b
10	2079	26.1	-10 20	8.7	8.8	A2	3	..	12673b	60	738	26.3	64 2	8.6	9.8	K5	3	..	18486b
11	1868	26.1	-15 47	8.1	8.9	G5	5	..	18983i	61	762	26.3	65 23	8.4	9.2	G5	5	..	15223b
12	1983	26.1	-16 19	10.0	10.0	B9	4	..	24594b	62	381	26.4	+73 49	7.59	8.01	F5	7	..	37559i
13	1984	26.1	-16 55	10.0	10.3	F2	1	..	18288b	63	1502	26.4	+16 26	8.8	9.1	F2	2	..	37570i
14	2007	26.1	-17 38	9.1	9.1	B9	4	..	18288b	64	1582	26.4	+12 53	6.59	7.37	G5	6	..	37570i
15	5590	26.1	-23 35	10.7	8.9	B9	3	..	18301b	65	1984	26.4	-4 28	7.9	8.9	Ko	5	..	20802b
16	4457	26.1	-26 9	9.5	8.9	B9	1	..	20856b	66	2012	26.4	-7 33	8.5	9.5	Ko	2	..	20802b
17	3260	26.1	-43 6	3.27	6.1	K5	..	5, R	28,200	67	2087	26.4	-10 3	9.66	9.61	B8	3	..	44418b
18	3261	26.1	-43 49	10.2	10.2	F2	2	..	20671b	68	1939	26.4	-15 0	9.51	9.51	Ao	5	..	24594b
19	638	26.1	-68 32	9.4	10.4	Ko	1	..	15223b	69	1871	26.4	-15 54	9.1	10.1	Ko	1	..	18983b
20	512	26.2	+66 41	7.51	8.86	Ma	6	..	37713i	70	1987	26.4	-16 15	10.2	10.3	A2	2	..	24594b
21	1327	26.2	+51 32	6.52	7.52	Ko	6	..	37515i	71	2010	26.4	-18 2	9.1	9.7	Go	2	..	18288b
22	1650	26.2	+18 19	9.0	9.6	G	2	..	37570i	72	1982	26.4	-20 15	9.5	9.7	A3	2	..	18288b
23	1556	26.2	+10 18	8.1	8.1	B9	4	..	37581i	73	1979	26.4	-21 35	8.1	8.0	B3	7	..	18301b
24	1704	26.2	+6 37	9.2	9.2	A	1	..	37581i	74	1906	26.4	-22 40	9.3	8.8	Ao	3	..	44433b
25	1706	26.2	+3 15	8.7	9.9	K5	1	..	12755b	75	4445	26.4	-28 38	8.3	8.4	Ko	5	0,2	42915b
26	1743	26.2	-0 55	6.60	7.38	G5	5	..	37580i	76	3871	26.4	-33 12	10.1	8.8	F	3	..	42915b
27	2143	26.2	-5 48	9.1	10.3	K5	2	..	44418b	77	3264	26.4	-43 51	9.1	9.4	G5	3	..	20671b
28	2144	26.2	-5 56	9.2	9.3	A2	3	..	20802b	78	3459	26.4	-44 23	9.1	10.1	K5	2	..	20671b
29	2150	26.2	-6 6	8.5	9.5	Ko	2	..	20802b	79	1190	26.4	-52 15	8.3	8.8	A2	7	..	24589b
30	2086	26.2	-9 54	6.97	8.04	K2	3	..	12673b	80	1236	26.4	-57 52	6.59	7.7	Ko	7	..	12757b
31	2081	26.2	-10 6	9.51	9.51	Ao	1	..	12673b	81	108	26.4	-85 48	9.6	9.7	A2	3	..	15145b
32	1998	26.2	-12 57	7.9	7.9	Ao	4	..	12673b	82	1641	26.5	+44 43	8.2	9.3	K2	2	..	37463i
33	1985	26.2	-16 27	10.2	10.3	A2	3	..	24594b	83	1608	26.5	+31 30	8.6	9.0	F5	2	..	37569i
34	1986	26.2	-16 53	8.9	10.0	K2	1	..	18288b	84	1629	26.5	+21 19	8.6	8.7	A2	5	..	37472i
35	2009	26.2	-17 42	9.3	9.4	A2	2	..	18288b	85	2065	26.5	-14 2	10.4	10.4	A	1	..	24594b
36	..	26.2	-18 39	..	..	Ko	1	..	24594b	86	1940	26.5	-14 11	10.4	10.5	A2	2	..	24594b
37	1980	26.2	-20 36	7.5	7.6	Ao	4	0,9	42935b	87	1941	26.5	-14 19	10.4	11.2	G5	2	..	24594b
38	1974	26.2	-21 21	8.7	9.4	Ko	3	..	18301b	88	1988	26.5	-16 41	10.0	10.0	Ao	3	..	18288b
39	4598	26.2	-30 29	9.3	9.1	Ko	2	..	42915b	89	1872	26.5	-18 33	9.7	10.8	K2	2	..	24594b
40	4616	26.2	-31 6	9.5	9.2	F5	4	..	42915b	90	1985	26.5	-20 48	9.2	8.5	B9	3	..	18301b
41	4080	26.2	-32 43	10.1	8.9	G	2	..	20670b	91	3411	26.5	-38 27	8.6	9.3	Go	3	..	18435b
42	3662	26.2	-36 7	9.9	10.4	Ao	3	..	20670b	92	3112	26.5	-41 38	10.6	9.6	Ao	3	..	20671b
43	3180	26.2	-40 5	9.5	9.6	Ao	2	..	20670b	93	2981	26.5	-49 1	8.4	8.8	A2	8	..	24589b
44	3275	26.2	-42 46	9.8	10.1	G5	1	..	20671b	94	696	26.5	-66 40	9.1	9.9	G5	1	..	15223b
45	1245	26.2	-55 26	9.4	9.8	F5	1	..	24589b	95	640	26.5	-68 42	8.8	9.2	F5	3	..	15223b
46	128	26.2	-84 51	8.7	8.8	A2	5	..	15145b	96	310	26.5	-77 43	9.3	10.3	Ko	4	..	20652b
47	1738	26.3	+37 14	7.8	8.6	G5	3	..	37569i	97	382	26.6	+73 34	9.0	9.6	G	2	..	37559i
48	1601	26.3	+11 20	9.0	10.0	Ko	1	..	37581i	98	1629	26.6	+34 9	7.34	7.34	Ao	8	..	37569i
49	1557	26.3	+10 3	7.82	9.00	K5	3	..	37581i	99	1409	26.6	+27 52	8.6	8.7	A2	4	1,3	37569i
50	2145	26.3	-5 8	8.15	8.65	F8	3	..	20802b	100	1653	26.6	+18 35	7.8	8.2	F5	5	3,3	37570i

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

59800

7<sup>h</sup> 26<sup>m</sup>.6

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1651	26.6	+18 5	8.4	9.4	Ko	2	..	3757oi	51	1746	26.8	- 0 18	9.0	9.0	Ao	4	..	3758oi
2	1691	26.6	+14 20	9.0	10.4	Ma	..	..	M	52	1986	26.8	- 4 9	9.1	9.9	G5	1	..	20802b
3	1754	26.6	+ 7 4	9.7	9.7	Ao	2	..	12755b	53	2153	26.8	- 6 34	8.4	8.4	B8	5	..	20802b
4	1831	26.6	+ 1 54	9.7	9.7	A	1	..	3758oi	54	1957	26.8	- 8 44	9.1	10.1	Ko	1	..	20802b
5	1833	26.6	+ 1 23	7.5	8.5	Ko	5	..	3758oi	55	2090	26.8	-10 4	9.31	9.29	B9	1	..	12673b
6	1955	26.6	- 8 31	7.7	8.8	K2	3	..	12673b	56	1944	26.8	-14 45	7.26	8.26	Ko	6	..	18983b
7	1954	26.6	- 8 52	9.3	9.8	F8	3	..	44418b	57	1875	26.8	-15 5	8.46	8.46	Ao	5	..	18983b
8	1956	26.6	- 8 56	9.7	9.7	Ao	2	..	44418b	58	2015	26.8	-17 27	9.0	10.2	K5	3	..	18288b
9	2002	26.6	-12 34	9.2	9.2	Ao	1	..	12673b	59	..	26.8	-17 57	..	..	Ao	2	..	24594b
10	2012	26.6	-17 10	9.5	10.7	K5	1	..	24594b	60	1879	26.8	-18 26	10.0	10.1	A3	1	..	18288b
11	2013	26.6	-17 29	9.1	9.6	F8	4	..	18288b	61	4454	26.8	-28 32	8.9	8.4	Go	1	..	20856b
12	2011	26.6	-18 3	10.0	10.0	Ao	3	..	24594b	62	4493	26.8	-29 41	10.0	8.9	Ao	3	..	42915b
13	1873	26.6	-18 43	9.1	8.9	B3	4	..	18288b	63	3877	26.8	-33 32	9.9	9.2	Ao	3	..	20670b
14	5603	26.6	-23 18	9.5	7.7	B8	5	..	18301b	64	3879	26.8	-33 53	7.44	7.3	Bo	3	..	11110b
15	4467	26.6	-26 47	9.0	8.3	Ao	4	..	20856b	65	3637	26.8	-35 39	10.3	10.5	Go	2	..	20670b
16	3647	26.6	-34 32	9.9	10.2	F5	2	..	20670b	66	3629	26.8	-37 38	10.6	10.1	Ao	4	..	20670b
17	3634	26.6	-35 17	9.5	10.8	K5	2	..	20670b	67	3356	26.8	-39 27	8.1	9.3	K	1	..	18435b
18	3635	26.6	-35 26	10.1	10.1	A2	3	..	20670b	68	3467	26.8	-44 42	7.7	7.9	B5	7	..	20786b
19	3665	26.6	-36 38	10.1	10.4	F5	2	..	20670b	69	3196	26.8	-46 29	7.2	7.7	Ao	2	..	8951b
20	3627	26.6	-37 36	10.3	10.4	F8	2	..	20670b	70	2527	26.8	-51 27	9.6	9.4	F2	4	..	24589b
21	2523	26.6	-51 35	9.8	9.1	B8	6	..	24589b	71	1287	26.8	-54 18	9.7	9.8	A2	2	..	24589b
22	1285	26.6	-54 29	8.9	10.0	K2	1	..	24589b	72	917	26.8	-58 12	8.6	8.8	Ao	2	..	18486b
23	1286	26.6	-54 51	9.5	10.3	G5	3	..	24589b	73	739	26.8	-63 21	9.5	9.5	Ao	4	..	18486b
24	916	26.6	-58 20	8.3	9.1	G5	2	..	12757b	74	513	26.9	+66 55	8.0	9.0	Ko	5	..	37713i
25	1223	26.7	+52 9	8.5	8.6	A3	2	..	37515i	75	1328	26.9	+51 45	8.1	8.9	G5	1	..	37515i
26	1740	26.7	+37 25	6.51	7.51	Ko	6	5,6	37448i	76	1282	26.9	+46 23	7.28	8.46	K5	4	..	37501i
27	1645	26.7	+36 1	7.9	8.3	F5	6	..	37569i	77	1576	26.9	+32 16	8.8	8.8	A	2	..	37569i
28	1630	26.7	+21 37	6.80	7.58	G5	6	..	37472i	78	1744	26.9	+23 7	6.44	7.22	G5	5	..	37472i
29	1591	26.7	+15 31	9.4	9.7	F	2	..	3757oi	79	1732	26.9	+ 4 43	8.70	8.78	A3	4	..	12755b
30	1977	26.7	+ 0 41	7.9	8.9	Ko	3	..	3758oi	80	1708	26.9	+ 2 57	6.73	6.73	Ao	8	..	3758oi
31	2017	26.7	- 7 55	8.1	8.6	F8	5	..	20802b	81	1691	26.9	+ 2 8	5.26	5.40	A5	..	5,9 R	56,84
32	1980	26.7	-12 1	8.7	8.7	Ao	4	..	12673b	82	2148	26.9	- 5 21	8.7	8.5	B3	3	..	20802b
33	2006	26.7	-12 18	8.3	9.3	Ko	2	..	12673b	83	2149	26.9	- 5 33	9.1	10.1	Ko	3	..	44418b
34	1943	26.7	-15 0	10.0	11.2	K5	1	..	24594b	84	2009	26.9	-12 33	8.5	8.6	A3	4	..	12673b
35	2014	26.7	-17 47	9.1	9.1	Ao	3	..	18288b	85	1991	26.9	-16 5	8.5	9.1	Go	1	..	18983b
36	1876	26.7	-18 21	10.4	11.5	K2	1	..	24594b	86	1990	26.9	-16 37	10.6	10.6	Ao	2	..	24594b
37	1878	26.7	-18 36	9.5	10.7	K5	2	..	24594b	87	1881	26.9	-18 15	10.0	10.0	Ao	2	..	18288b
38	1982	26.7	-21 24	9.2	9.1	B9	3	..	18301b	88	1880	26.9	-19 2	9.5	9.5	Ao	2	..	18288b
39	1981	26.7	-22 2	9.2	9.4	Ko	2	..	44433b	89	1984	26.9	-21 40	9.1	8.5	B9	4	..	18301b
40	5604	26.7	-23 59	10.0	8.6	Ao	3	..	18301b	90	4620	26.9	-30 45	4.77	6.2	Go	..	0,7 R	28,200
41	5514	26.7	-24 27	8.9	8.0	B8	5	..	20856b	91	4092	26.9	-32 29	9.7	8.8	F5	3	..	42915b
42	3354	26.7	-39 23	8.3	8.5	Go	4	..	18435b	92	3881	26.9	-33 40	8.6	9.1	Ko	3	..	20670b
43	3465	26.7	-44 12	10.5	10.2	A5	2	..	20671b	93	3638	26.9	-35 12	10.8	10.5	A5	2	..	20670b
44	1063	26.8	+60 52	8.9	9.7	G5	2	..	37526i	94	3190	26.9	-40 47	6.58	7.5	G5	4	..	42928b
45	1704	26.8	+43 15	9.5	10.5	K	1	..	37463i	95	1192	26.9	-52 10	7.9	8.8	Ko	7	..	24589b
46	1731	26.8	+42 35	8.18	9.18	Ko	2	..	37463i	96	763	26.9	-66 3	8.9	9.9	Ko	4	..	15223b
47	1680	26.8	+41 23	7.9	9.1	K5	2	..	37463i	97	579	27.0	+65 19	7.35	8.35	Ko	5	..	37713i
48	1547	26.8	+33 6	7.8	8.6	G5	4	..	37569i	98	1411	27.0	+27 39	9.0	9.0	Ao	2	..	38172i
49	1587	26.8	+26 43	8.8	9.6	G5	1	..	38172i	99	1935	27.0	- 3 47	8.3	9.3	Ko	3	..	20802b
50	1586	26.8	+12 20	8.7	8.7	A	1	..	3757oi	100	1958	27.0	- 8 20	10.0	10.1	A5	2	..	44418b

## THE HENRY DRAPER CATALOGUE.

59900

7<sup>h</sup> 27<sup>m</sup>.0

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1959	m. 27.0	° 8 29	9.1	9.7	Go	2	..	20802b	51	1699	m. 27.2	° 5 3	8.81	9.37	Go	3	..	12755b
2	1947	27.0	-14 25	10.4	10.7	Fo	2	..	24594b	52	1988	27.2	-4 49	8.3	8.3	B9	6	..	20802b
3	1993	27.0	-16 41	10.4	11.2	G5	1	..	24594b	53	2154	27.2	-5 57	9.5	9.6	A2	3	..	44418b
4	1992	27.0	-17 2	9.5	9.5	Ao	2	..	18288b	54	1962	27.2	-8 5	9.1	10.1	Ko	2	..	44418b
5	2016	27.0	-17 41	9.2	10.0	G5	1	..	18288b	55	1963	27.2	-8 42	9.7	9.8	A3	3	..	44418b
6	..	27.0	-17 50	..	..	Ao	1	..	24594b	56	1948	27.2	-14 53	10.0	10.0	Ao	2	..	24594b
7	1882	27.0	-18 57	9.1	9.4	Fo	4	..	18288b	57	1879	27.2	-15 8	9.2	9.5	F2	3	..	24594b
8	1928	27.0	-19 10	10.1	9.7	Ao	1	..	18288b	58	1881	27.2	-15 13	10.6	10.6	Ao	2	..	24594b
9	1989	27.0	-20 31	9.7	9.6	A3	2	..	18288b	59	..	27.2	-16 20	..	..	Ao	1	..	24594b
10	1991	27.0	-21 1	9.1	8.8	B5	4	..	18301b	60	1996	27.2	-16 51	9.7	9.7	B9	2	..	18288b
11	1985	27.0	-21 25	9.3	9.1	F5	3	..	18301b	61	1997	27.2	-16 59	9.1	9.1	B8	2	..	18288b
12	3654	27.0	-34 4	9.9	10.1	Go	2	..	20670b	62	2017	27.2	-17 45	9.3	10.1	G5	3	..	24594b
13	3655	27.0	-34 45	8.3	9.0	B8	5	..	42915b	63	..	27.2	-17 50	..	..	Ao	1	..	24594b
14	3634	27.0	-37 19	8.6	8.4	Ao	4	..	42915b	64	1884	27.2	-19 1	9.2	10.2	Ko	1	..	18288b
15	3415	27.0	-38 24	10.1	10.1	K2	2	..	20670b	65	1909	27.2	-22 53	8.5	7.7	B8	5	..	18301b
16	3121	27.0	-41 24	9.9	9.6	Ao	4	..	20671b	66	5628	27.2	-23 13	11.2	9.4	Go	2	..	18301b
17	3120	27.0	-41 37	8.6	9.8	K5	3	..	20671b	67	3637	27.2	-37 8	6.55	7.3	G5	5	5,8	42928b
18	3289	27.0	-42 7	8.6	8.1	A2	7	..	20671b	68	3293	27.2	-42 54	9.8	10.2	K	1	..	20671b
19	3472	27.0	-44 57	9.8	9.6	Ao	2	..	20786b	69	3294	27.2	-43 1	9.2	9.6	Ko	4	..	20671b
20	2791	27.0	-50 58	8.5	9.1	G5	6	..	24589b	70	3276	27.2	-43 47	9.8	9.3	F5	4	..	20671b
21	718	27.0	-64 9	9.8	9.8	Ao	2	..	18486b	71	2793	27.2	-50 21	9.8	9.7	F5	4	..	24589b
22	1223	27.1	+56 38	8.8	8.8	Ao	4	E	37526i	72	1194	27.2	-52 57	10.3	10.3	Ao	2	..	24589b
23	1734	27.1	+42 19	7.80	8.14	F2	6	..	37463i	73	261	27.2	-78 58	8.4	9.4	Ko	8	..	20652b
24	1577	27.1	+32 51	8.0	9.0	Ko	3	..	37569i	74	1092	27.3	+59 46	8.51	9.58	K2	2	..	37526i
25	1588	27.1	+26 19	7.8	7.9	A2	5	..	38172i	75	1548	27.3	+48 25	7.17	7.25	A3	5	..	37515i
26	1505	27.1	+16 34	8.3	9.7	Ma	3	..	37570i	76	1451	27.3	+45 9	7.82	8.82	Ko	4	..	37463i
27	1695	27.1	+1 57	8.2	9.0	G5	3	..	37580i	77	1971	27.3	+38 55	8.6	9.0	F5	2	..	37463i
28	1987	27.1	-4 9	9.1	10.3	K5	1	..	20802b	78	1600	27.3	+17 41	9.0	10.0	K	1	..	37570i
29	2153	27.1	-5 43	7.02	8.02	Ko	7	..	20802b	79	1979	27.3	+0 43	8.3	8.3	Ao	3	..	37580i
30	2156	27.1	-6 29	8.3	8.3	Ao	4	..	20802b	80	1750	27.3	-0 17	8.1	8.5	F5	5	..	37580i
31	2019	27.1	-7 35	9.3	9.3	Ao	2	..	20802b	81	2156	27.3	-5 16	10.1	10.1	Ao	2	..	44418b
32	..	27.1	-8 28	..	..	A	..	..	..	82	2157	27.3	-7 2	8.1	8.1	B8	5	..	20802b
33	1961	27.1	-8 28	9.1	9.1	G	3	R	20802b	83	2026	27.3	-7 38	9.3	9.4	A3	2	..	20802b
34	1995	27.1	-16 59	7.8	7.7	B5	7	3,3	18288b	84	1964	27.3	-8 40	6.02	6.44	F5	8	..	12673b
35	..	27.1	-17 33	..	..	Ao	2	..	18288b	85	..	27.3	-16 44	..	..	B9	1	..	24594b
36	1929	27.1	-19 17	7.4	8.8	K5	3	..	18301b	86	1999	27.3	-16 46	9.3	9.3	B8	2	..	18288b
37	1992	27.1	-20 32	9.7	9.6	A3	2	..	18288b	87	1885	27.3	-18 29	9.7	9.7	Ao	3	..	18288b
38	1986	27.1	-21 31	8.7	8.6	Fo	5	..	18301b	88	5631	27.3	-23 8	9.5	9.4	G5	2	..	18301b
39	5624	27.1	-23 37	9.5	9.1	Ko	3	..	18301b	89	3660	27.3	-34 46	7.72	8.4	K5	4	..	42915b
40	4630	27.1	-30 20	8.3	8.8	Ko	3	..	42915b	90	3362	27.3	-39 40	9.3	9.4	Go	2	..	20670b
41	4641	27.1	-31 8	10.4	9.1	B3	3	..	42915b	91	2796	27.3	-50 59	7.8	8.2	Fo	8	..	24589b
42	3656	27.1	-34 31	11.3	10.5	A5	2	..	20670b	92	2528	27.3	-51 56	9.1	9.2	G5	5	..	24589b
43	3635	27.1	-37 41	9.7	10.1	F8	4	..	20670b	93	1195	27.3	-52 35	9.4	10.6	K5	1	..	24589b
44	1289	27.1	-54 24	9.6	10.6	Ko	1	..	24589b	94	1247	27.3	-55 6	8.27	8.5	A2	8	..	24589b
45	764	27.1	-65 38	10.0	10.1	A2	2	..	15223b	95	644	27.3	-68 25	7.5	7.8	F2	3	..	9003b
46	736	27.1	-69 22	7.8	8.2	F5	7	..	15168b	96	1601	27.4	+17 22	9.0	9.5	F8	2	..	37570i
47	1525	27.2	+30 51	7.46	8.46	Ko	5	..	37569i	97	1506	27.4	+16 12	7.7	7.7	Ao	6	1,3	37570i
48	1598	27.2	+17 17	9.0	9.6	G	1	..	37570i	98	1595	27.4	+15 4	9.4	9.7	F	1	R	37570i
49	1559	27.2	+10 39	9.4	10.0	G	2	R	37581i	99	1604	27.4	+11 27	9.4	9.4	A	1	..	37581i
50	1800	27.2	+8 33	var.	var.	Md	1	R	38971i	100	1561	27.4	+10 48	8.7	8.7	B8	3	..	37581i

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

60000

7<sup>h</sup> 27<sup>m</sup>.4

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1801	27.4 + 8 53	8.12	9.12	Ko	2	..	..	37581i	51	1890	27.6 - 18 20	10.4	10.4	A	1	..	..	18288b
2	1756	27.4 + 7 21	8.1	8.6	F8	3	..	..	37581i	52	1889	27.6 - 18 30	10.0	10.1	A2	2	..	..	18288b
3	1837	27.4 + 1 47	9.0	9.0	A	1	..	..	37580i	53	1934	27.6 - 19 17	9.1	9.6	Ko	1	..	..	18288b
4	2158	27.4 - 6 21	9.2	10.0	G5	3	..	..	44418b	54	1999	27.6 - 20 42	7.9	7.6	B8	8	..	..	18301b
5	2094	27.4 - 10 3	8.96	8.96	Ao	2	..	..	12673b	55	1991	27.6 - 21 59	9.3	8.8	B9	3	..	..	18288b
6	1985	27.4 - 11 19	9.1	9.1	Ao	2	..	..	12673b	56	1910	27.6 - 22 19	9.3	9.1	Ao	2	..	..	18288b
7	1882	27.4 - 15 11	9.3	9.3	Ao	3	..	..	24594b	57	4492	27.6 - 26 41	8.9	8.3	B9	4	..	..	20856b
8	2000	27.4 - 16 21	10.1	10.1	Ao	2	..	..	24594b	58	4103	27.6 - 32 36	8.9	9.1	G5	2	..	..	42915b
9	..	27.4 - 16 49	..	..	B9	2	..	..	24594b	59	3132	27.6 - 41 40	8.9	8.5	A3	6	..	..	20671b
10	..	27.4 - 17 3	..	..	Ao	1	..	..	24594b	60	1198	27.6 - 52 26	5.94	6.9	G5	..	..	..	28,200
11	2018	27.4 - 18 1	10.0	10.0	Ao	2	..	..	18288b	61	700	27.6 - 66 46	8.9	9.0	A3	6	0,6	..	15223b
12	1887	27.4 - 18 21	9.7	9.7	Ao	2	..	..	18288b	62	213	27.7 + 81 55	7.60	7.58	B9	5	..	..	37546i
13	1886	27.4 - 18 43	9.3	9.3	Ao	2	..	..	18288b	63	1549	27.7 + 48 55	6.91	7.19	Fo	7	..	..	37515i
14	1988	27.4 - 21 46	8.3	7.9	B8	7	..	..	18301b	64	2029	27.7 - 7 52	8.4	9.4	Ko	4	..	..	20802b
15	4468	27.4 - 28 58	8.3	8.4	Fo	5	..	..	42915b	65	1987	27.7 - 11 20	8.6	9.8	K5	1	..	..	44418b
16	4637	27.4 - 30 11	8.35	9.2	Ko	3	..	..	42915b	66	1988	27.7 - 11 40	9.2	9.2	Ao	1	..	..	44418b
17	4634	27.4 - 30 18	8.3	8.5	F2	5	..	..	42915b	67	1952	27.7 - 14 50	9.0	9.3	F2	2	..	..	18983b
18	3645	27.4 - 35 3	9.75	10.2	Ko	3	..	..	20670b	68	2001	27.7 - 16 44	8.1	9.2	K2	5	..	..	18288b
19	3421	27.4 - 38 31	10.6	9.6	F5	3	..	..	20670b	69	2019	27.7 - 17 57	10.5	10.5	Ao	1	..	..	24594b
20	2991	27.4 - 48 23	9.4	9.1	Ao	2	..	..	20786b	70	1912	27.7 - 22 42	8.3	9.1	K2	3	..	..	18301b
21	2529	27.4 - 51 7	10.2	10.3	Go	1	..	..	24589b	71	4641	27.7 - 30 50	10.0	9.1	A	2	R	..	42915b
22	2530	27.4 - 51 39	10.2	10.0	F2	2	..	..	24589b	72	3649	27.7 - 35 28	9.3	9.6	B9	3	..	..	42915b
23	737	27.4 - 69 19	8.5	8.6	A2	5	..	..	15168b	73	3683	27.7 - 36 16	9.3	9.0	B9	2	..	..	42915b
24	580	27.4 - 72 2	8.9	10.1	K5	2	..	..	15168b	74	3427	27.7 - 38 10	11.0	9.8	F5	3	..	..	20670b
25	1706	27.5 + 43 19	9.2	10.0	G5	1	..	..	37463i	75	3428	27.7 - 38 23	8.6	9.3	Ko	3	..	..	18435b
26	2092	27.5 - 10 17	8.4	9.4	Ko	1	..	..	12673b	76	640	27.8 + 64 52	8.25	9.25	Ko	3	..	..	37713i
27	1986	27.5 - 11 15	9.1	9.1	Ao	2	..	..	12673b	77	1224	27.8 + 52 25	8.2	8.6	F5	3	..	..	37515i
28	1950	27.5 - 14 27	8.5	8.5	Ao	2	..	..	18983b	78	1707	27.8 + 43 41	8.6	9.6	Ko	2	..	..	37463i
29	1884	27.5 - 15 51	8.5	9.3	G5	2	..	..	18983b	79	1527	27.8 + 30 36	9.4	9.5	A3	2	..	..	37569i
30	4490	27.5 - 26 18	8.3	9.2	K5	1	..	..	20856b	80	1604	27.8 + 17 48	9.0	9.8	G5	1	..	..	37570i
31	4650	27.5 - 31 11	10.0	8.8	A	2	..	..	42915b	81	1598	27.8 + 15 51	6.67	7.67	Ko	7	0,3	..	37570i
32	3235	27.5 - 45 27	8.4	8.1	F2	4	..	..	20858b	82	1807	27.8 + 8 12	8.42	8.70	F	4	..	..	37581i
33	3099	27.5 - 47 16	8.8	9.3	F8	2	..	..	20786b	83	1704	27.8 + 5 50	9.0	9.5	F8	3	..	..	12755b
34	2880	27.5 - 49 52	10.0	10.3	Ko	1	..	..	24589b	84	1982	27.8 + 0 52	8.69	8.69	Ao	2	..	..	37580i
35	2532	27.5 - 51 43	9.0	9.7	K2	4	..	..	24589b	85	1755	27.8 - 1 35	8.7	9.1	F5	2	..	..	12772b
36	1290	27.5 - 54 42	8.8	8.8	Ao	8	..	..	24589b	86	1756	27.8 - 1 49	6.76	6.76	Ao	8	1,9	..	18560b
37	827	27.5 - 61 23	8.9	10.1	K	1	..	..	12757b	87	2159	27.8 - 5 44	9.3	9.8	F8	3	..	..	44418b
38	741	27.5 - 63 15	8.7	9.0	Fo	7	..	..	18486b	88	2162	27.8 - 6 13	8.5	8.5	B8	4	..	..	20802b
39	312	27.5 - 77 30	10.4	11.2	G5	1	..	..	20652b	89	1953	27.8 - 14 46	9.3	9.6	Fo	3	..	..	24594b
40	165	27.5 - 83 44	8.8	10.0	K5	3	..	..	20557b	90	..	27.8 - 14 58	..	..	Ao	2	..	..	24594b
41	583	27.6 + 65 33	8.5	9.3	G5	3	..	..	37713i	91	1891	27.8 - 18 10	9.5	10.5	Ko	2	..	..	24594b
42	1095	27.6 + 59 37	10.2	10.3	A2	1	..	..	37526i	92	1893	27.8 - 18 17	7.5	7.8	Fop	6	R	..	18983b
43	1596	27.6 + 15 2	9.4	9.4	Ao	3	..	..	37570i	93	2003	27.8 - 20 19	8.3	8.5	A2	5	..	..	18301b
44	1703	27.6 + 5 16	7.7	7.7	B8	5	..	..	37580i	94	4656	27.8 - 25 12	8.00	7.8	A3	7	..	..	18301b
45	1980	27.6 - 0 5	8.93	8.93	Ao	3	..	..	37580i	95	4187	27.8 - 27 33	9.5	8.7	Ao	2	..	..	20856b
46	2167	27.6 - 2 32	8.9	8.9	Ao	4	..	..	20802b	96	3672	27.8 - 34 9	10.8	10.5	Ko	1	..	..	20670b
47	2158	27.6 - 5 25	9.5	10.0	F8	2	..	..	44418b	97	3671	27.8 - 34 31	9.3	9.6	Go	3	..	..	42915b
48	2028	27.6 - 7 29	9.0	9.5	F8	2	..	..	20802b	98	3650	27.8 - 35 56	6.46	7.0	B5p	5	0,9 R	..	11110b
49	2076	27.6 - 13 55	9.1	9.1	B8	4	..	..	24594b	99	3645	27.8 - 37 47	9.0	8.7	B9	4	..	..	18435b
50	1885	27.6 - 15 43	9.3	9.3	Ao	4	..	..	24594b	100	3490	27.8 - 44 47	9.8	9.3	Ao	3	..	..	20786b



THE HENRY DRAPER CATALOGUE.

60100

7<sup>h</sup> 27<sup>m</sup>.8

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	720	27.8	-64 25	9.3	9.6	Fo	3	..	18486b	51	648	28.0	-68 33	8.5	9.5	Ko	3	..	15223b
2	132	27.8	-84 17	7.64	7.3	B9	4	..	11010b	52	247	28.0	-79 46	8.9	9.7	G5	7	..	20652b
3	719	27.9	+63 34	7.7	8.0	F2	7	..	37526i	53	1636	28.1	+21 21	8.8	10.0	K5	1	..	37472i
4	1708	27.9	+43 36	9.5	9.5	Ao	2	..	37463i	54	1758	28.1	+19 0	9.4	9.4	A	1	..	37570i
5	1683	27.9	+41 6	7.6	7.7	A2	7	..	37463i	55	1989	28.1	+ 0 24	8.3	8.3	B8	6	..	37580i
6	1550	27.9	+33 21	7.70	7.76	A2	7	..	37569i	56	2166	28.1	- 6 39	7.33	8.33	Ko	5	..	20802b
7	1510	27.9	+16 3	5.07	5.13	A2	..	2, R	56,84	57	2036	28.1	- 7 44	8.4	8.4	B9	5	..	20802b
8	1694	27.9	+ 9 33	7.72	8.28	Go	4	..	37581i	58	1970	28.1	- 8 51	9.3	9.3	A	1	..	12673b
9	1693	27.9	+ 9 24	8.5	8.5	Ao	3	..	37581i	59	2079	28.1	-13 30	9.1	9.2	A2	3	..	24594b
10	1705	27.9	+ 5 9	8.3	8.4	A5	3	..	37580i	60	2080	28.1	-13 48	10.1	10.1	Ao	3	..	24594b
11	1715	27.9	+ 3 30	5.66	5.80	A5	..	5,6 R	56,84	61	1956	28.1	-14 12	9.7	9.7	Ao	3	..	24594b
12	1985	27.9	+ 0 21	9.4	9.5	A3	2	..	37580i	62	2006	28.1	-16 37	9.0	9.8	G5	3	..	18288b
13	2161	27.9	- 5 46	9.5	9.6	A2	2	..	44418b	63	2024	28.1	-17 9	10.4	11.6	K5	1	..	24594b
14	2096	27.9	- 9 27	7.51	7.46	B8	7	..	12673b	64	1897	28.1	-18 58	8.9	9.9	Ko	4	..	18288b
15	1990	27.9	-11 13	9.1	9.9	G5	1	..	12673b	65	1917	28.1	-22 37	8.7	8.5	Fo	4	..	18301b
16	2016	27.9	-12 39	9.1	9.1	A	3	R	12673b	66	3895	28.1	-33 12	8.9	8.8	F5	2	..	42915b
17	2017	27.9	-12 39	9.1	9.1	A	3	R	12673b	67	3653	28.1	-35 19	10.3	10.5	G	1	..	20670b
18	..	27.9	-14 31	..	..	Ao	2	..	24594b	68	3652	28.1	-35 40	6.52	7.0	Ao	5	1,9	11110b
19	2021	27.9	-17 18	9.1	10.3	K5	2	..	18288b	69	3689	28.1	-36 38	8.7	9.6	K5	3	..	20670b
20	2022	27.9	-17 39	9.3	9.3	Ao	3	..	18288b	70	3690	28.1	-36 43	9.5	10.5	K5	2	..	20670b
21	1915	27.9	-22 16	9.7	9.2	G	1	..	18288b	71	3497	28.1	-44 18	8.5	9.0	A5	3	..	20786b
22	5647	27.9	-23 55	10.7	8.9	B9	2	..	18301b	72	2534	28.1	-51 7	9.6	9.2	B9	6	..	24589b
23	5539	27.9	-24 11	8.9	9.0	Ko	3	..	18301b	73	1358	28.1	-56 6	8.0	9.1	K5	4	..	24589b
24	5540	27.9	-24 57	8.80	8.7	F5	4	..	18301b	74	1240	28.1	-58 1	8.4	9.2	F5	3	..	12757b
25	4517	27.9	-29 15	9.3	8.8	A5	3	R	20856b	75	723	28.1	-64 9	9.5	9.8	F2	2	..	18486b
26	3686	27.9	-36 41	8.6	8.7	Ao	3	..	42915b	76	722	28.1	-64 34	9.2	9.8	Go	3	..	18486b
27	3431	27.9	-38 39	9.3	9.6	Go	3	..	18435b	77	263	28.1	-78 59	10.5	10.6	A2	3	..	20652b
28	3365	27.9	-39 49	9.5	9.8	G5	2	E	20670b	78	1581	28.2	+32 6	2.85	2.85	Ao	..	R	28,200
29	3242	27.9	-45 41	8.8	9.3	Ko	2	..	20858b	79	..	28.2	+32 6	1.99	1.99	Ao	..	R	28,200
30	2803	27.9	-50 24	6.68	6.9	Ao	5	..	8951b	80	1415	28.2	+28 38	7.7	7.7	B9	6	1,7	37569i
31	1354	27.9	-56 31	7.9	8.8	Ao	5	..	24589b	81	1637	28.2	+21 13	9.1	10.3	K5	1	..	37472i
32	759	27.9	-67 57	9.4	10.2	G5	1	..	15223b	82	1601	28.2	+15 2	8.64	9.64	Ko	1	..	37570i
33	488	28.0	+68 41	8.8	9.8	Ko	3	..	38155i	83	1702	28.2	+13 38	8.1	8.7	Go	5	..	37570i
34	1226	28.0	+56 37	8.0	8.1	A2	6	E	37526i	84	2167	28.2	- 6 12	8.9	10.1	K5	1	..	20802b
35	1661	28.0	+18 32	8.3	9.7	Mb	3	..	37570i	85	1971	28.2	- 8 50	9.1	9.1	Ao	3	..	12673b
36	1607	28.0	+11 14	7.8	9.2	Ma	5	0,4	37570i	86	2083	28.2	-13 49	9.5	10.3	G5	2	..	24594b
37	1842	28.0	+ 1 2	8.29	9.07	G5	1	..	37580i	87	1957	28.2	-14 30	9.7	10.0	Fo	2	..	24594b
38	2165	28.0	- 7 3	7.7	7.7	B9	7	..	20802b	88	1958	28.2	-14 56	10.0	10.0	A	3	..	24594b
39	2097	28.0	- 9 11	7.51	8.58	K2	2	..	12673b	89	..	28.2	-14 59	..	..	Ao	2	..	24594b
40	2093	28.0	-10 59	8.7	8.8	A2	2	..	12673b	90	2008	28.2	-16 23	8.3	8.4	A3	7	..	18288b
41	2018	28.0	-12 40	9.0	9.8	G5	2	..	24594b	91	..	28.2	-18 14	..	..	Ao	2	..	24594b
42	1888	28.0	-15 15	9.05	9.61	Go	5	..	24594b	92	1898	28.2	-19 0	10.0	..	A2	3	..	18288b
43	..	28.0	-17 30	..	..	Ao	1	..	24594b	93	5658	28.2	-23 51	9.0	8.3	F8	4	..	18301b
44	2023	28.0	-18 2	7.72	8.72	Ko	4	0,4	18983b	94	5550	28.2	-24 49	10.0	8.9	B9	3	..	18301b
45	1895	28.0	-18 32	9.1	10.1	Ko	1	..	18288b	95	4194	28.2	-27 42	8.1	8.4	B9	5	..	20856b
46	1894	28.0	-18 41	9.3	9.3	B9	4	..	18288b	96	4485	28.2	-28 31	9.3	8.4	B	3	R	44428b
47	5651	28.0	-24 1	9.7	9.2	Ko	1	..	18301b	97	4525	28.2	-29 25	7.8	8.8	K5	4	..	42915b
48	5542	28.0	-24 48	10.2	9.2	Ao	3	..	18301b	98	3654	28.2	-35 19	11.7	10.1	K5	2	..	20670b
49	833	28.0	-59 23	8.5	9.4	Ao	2	..	15516b	99	3246	28.2	-45 58	8.3	8.7	B9	5	..	20858b
50	721	28.0	-64 18	6.28	8.7	K5	7	..	18486b	100	2889	28.2	-49 53	10.5	10.3	F5	1	..	24589b



## ANNALS OF HARVARD COLLEGE OBSERVATORY.

60200

7<sup>h</sup> 28<sup>m</sup>.2

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	2809	28.2	-50 57	7.2	8.8	Ko	7	..	24589b	51	725	28.4	-64 28	9.8	9.9	A3	2	..	18486b
2	262	28.2	-78 13	10.4	11.2	G5	1	..	20652b	52	1085	28.5	+57 5	7.72	8.50	G5	6	0,4	37526i
3	1551	28.3	+48 37	8.9	8.9	Ao	2	..	37515i	53	1645	28.5	+49 14	8.4	9.0	Go	2	..	37515i
4	1416	28.3	+28 55	6.74	7.52	G5	6	..	37569i	54	1894	28.5	+39 55	8.62	9.18	G	3	..	37463i
5	1761	28.3	+19 39	9.2	9.6	F5	1	..	37570i	55	1703	28.5	+24 5	9.8	10.1	F2	1	..	38172i
6	1764	28.3	+7 38	8.3	9.3	Ko	3	..	37581i	56	1638	28.5	+21 51	9.0	9.1	A3	2	..	38172i
7	1714	28.3	+6 52	7.7	7.8	A5	4	2,3	37581i	57	1715	28.5	+6 2	9.0	9.1	A2	3	..	12755b
8	1743	28.3	+3 58	9.0	9.8	G5	2	..	12755b	58	2100	28.5	-10 16	8.9	10.0	K2	2	..	44418b
9	1990	28.3	+0 49	9.19	9.33	A5	1	..	37580i	59	2099	28.5	-10 49	9.5	9.5	Ao	2	..	44418b
10	1991	28.3	+0 27	9.0	9.1	A2	4	..	12772b	60	1994	28.5	-11 24	8.9	8.8	B5	2	..	12673b
11	2098	28.3	-9 30	9.1	10.2	K2	2	..	44418b	61	2084	28.5	-13 12	8.3	8.3	Ao	5	..	12673b
12	2100	28.3	-9 38	9.5	9.5	Ao	3	..	44418b	62	1962	28.5	-14 51	10.0	10.0	B9	2	..	24594b
13	..	28.3	-13 37	..	..	A2	2	..	24594b	63	1938	28.5	-19 20	9.1	8.8	B8	3	..	18301b
14	2010	28.3	-16 7	8.7	9.7	Ko	2	..	18288b	64	2010	28.5	-20 17	9.5	9.1	Ao	4	..	18288b
15	2025	28.3	-18 2	9.1	9.7	Go	3	..	18288b	65	2009	28.5	-20 35	8.6	8.5	Fo	3	..	18301b
16	1899	28.3	-18 50	10.0	10.0	Ao	2	..	18288b	66	2011	28.5	-20 42	var.	var.	Ko	3	R	18301b
17	1936	28.3	-19 49	9.7	9.4	Ao	2	..	18288b	67	4663	28.5	-30 58	10.2	9.1	Ao	3	..	42915b
18	..	28.3	-20 27	var.	var.	Md	..	R	M	68	3903	28.5	-33 59	9.3	9.1	K2	3	..	20670b
19	1997	28.3	-21 43	8.5	8.5	F5	6	..	18301b	69	3694	28.5	-36 44	10.8	10.5	A2	2	..	20670b
20	4195	28.3	-27 41	10.7	9.0	Ao	2	..	20856b	70	3145	28.5	-41 47	9.2	9.6	Ko	3	..	20671b
21	3677	28.3	-35 3	9.30	9.6	F8	3	..	42915b	71	1242	28.5	-57 14	8.5	9.1	Go	2	..	12757b
22	3691	28.3	-36 52	9.9	9.6	B8	5	..	20670b	72	1086	28.6	+57 48	8.0	8.8	G5	7	5,4	37526i
23	3433	28.3	-38 16	9.9	8.8	Ao	3	..	18435b	73	1896	28.6	+40 24	8.6	9.0	F5	2	..	37463i
24	3309	28.3	-42 48	8.9	8.8	Go	5	..	20671b	74	1612	28.6	+11 13	9.0	9.0	A	2	..	37581i
25	3310	28.3	-42 52	9.6	9.9	Go	2	..	20671b	75	1563	28.6	+10 47	6.21	6.21	Ao	8	..	37581i
26	2808	28.3	-50 24	9.4	10.3	Ko	1	..	24589b	76	2165	28.6	-6 1	7.38	8.38	Ko	6	..	20802b
27	1203	28.3	-52 41	8.1	8.8	F2	6	..	24589b	77	2085	28.6	-13 28	9.2	9.2	Ao	3	..	24594b
28	1294	28.3	-54 11	5.94	7.7	K5	..	0,10	56,123	78	1963	28.6	-14 39	10.0	10.1	A3	2	..	24594b
29	1293	28.3	-54 17	9.1	9.2	B8	5	..	24589b	79	1964	28.6	-14 58	9.01	9.01	Ao	2	..	18983b
30	1253	28.3	-55 24	9.6	10.0	F5	1	..	24589b	80	1940	28.6	-19 53	10.0	9.6	Ao	2	..	18288b
31	1360	28.3	-56 45	8.8	9.4	G5	3	..	24589b	81	2012	28.6	-20 18	9.5	9.2	A3	2	..	18288b
32	834	28.3	-59 54	8.37	8.5	A3	4	..	18486b	82	2000	28.6	-22 4	8.5	8.0	B9	7	..	18301b
33	1686	28.4	+41 42	8.9	9.9	Ko	1	..	37463i	83	4206	28.6	-27 31	10.2	8.9	Ao	1	..	20856b
34	1892	28.4	+40 44	7.56	8.12	Go	6	..	37463i	84	4205	28.6	-27 39	9.5	8.6	B	2	..	20856b
35	1417	28.4	+28 44	7.7	8.8	K2	2	..	37569i	85	4204	28.6	-27 45	9.3	8.9	F	1	..	20856b
36	1698	28.4	+2 12	8.7	9.5	G5	2	..	12755b	86	3147	28.6	-41 36	8.9	9.6	Ko	3	..	20671b
37	1996	28.4	-4 13	8.5	9.5	Ko	2	..	20802b	87	3307	28.6	-43 5	8.4	8.2	Ko	6	..	20671b
38	2101	28.4	-9 23	9.1	9.9	G5	2	..	44418b	88	2539	28.6	-51 13	10.9	10.0	F5	1	..	24589b
39	2020	28.4	-12 52	9.1	9.1	Ao	2	..	12673b	89	1256	28.6	-55 21	9.1	9.5	F5	2	..	24589b
40	2011	28.4	-16 10	9.7	9.7	B9	2	..	18288b	90	846	28.6	-61 2	7.3	8.3	F5	7	..	18486b
41	2012	28.4	-17 1	8.9	8.9	B9	3	..	18288b	91	652	28.6	-70 33	8.2	9.2	Ko	4	..	15168b
42	2026	28.4	-18 5	10.0	10.0	Ao	2	..	24594b	92	514	28.7	+66 26	7.07	8.07	Ko	6	..	37713i
43	1901	28.4	-18 19	8.7	9.7	Ko	4	..	18288b	93	1069	28.7	+60 44	6.86	6.86	Ao	7	0,9	37676i
44	1919	28.4	-22 36	9.5	9.7	K2	1	..	44433b	94	1227	28.7	+56 0	6.04	7.04	Ko	6	0,9	37676i
45	5665	28.4	-23 46	11.4	9.2	Ao	2	..	18301b	95	1710	28.7	+42 57	9.5	9.6	A3	1	..	37463i
46	5556	28.4	-24 22	9.2	8.9	F8	4	..	18301b	96	1649	28.7	+35 18	8.6	9.2	Go	2	..	37569i
47	4674	28.4	-25 55	9.2	8.6	F8	2	..	20856b	97	1418	28.7	+28 28	7.8	7.8	Ao	4	..	37569i
48	3377	28.4	-39 9	9.3	9.6	A2	2	E	20670b	98	1709	28.7	+25 9	8.0	8.6	Go	6	..	38172i
49	3305	28.4	-43 52	9.8	9.6	Go	3	..	20671b	99	1756	28.7	+23 10	7.9	8.7	G5	3	..	37472i
50	1361	28.4	-57 0	7.01	8.5	K2	4	..	12757b	100	1611	28.7	+17 36	8.7	8.7	A	2	..	37570i

THE HENRY DRAPER CATALOGUE.

60300

7<sup>h</sup> 28<sup>m</sup>.7

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1610	28.7	+17 9	7.7	8.5	G5	4	0,2	3757oi	51	2543	28.9	-51 16	10.9	10.0	F2	1	..	24589b
2	1602	28.7	+14 58	7.94	8.22	Fo	5	..	3757oi	52	2542	28.9	-52 1	10.2	10.3	G5	1	..	24589b
3	1699	28.7	+14 19	7.7	9.1	Ma	3	..	3757oi	53	1706	29.0	+24 9	8.0	8.4	F5	4	..	38172i
4	1613	28.7	+11 2	8.3	8.3	Ao	5	0,4	3757oi	54	1605	29.0	+15 51	8.3	9.3	Ko	2	..	3757oi
5	1765	28.7	+ 7 47	8.5	8.5	Ao	2	..	3758ii	55	1596	29.0	+12 31	7.4	7.4	B8	7	..	3757oi
6	1718	28.7	+ 3 51	8.5	9.7	K5	2	..	12755b	56	1615	29.0	+11 43	8.48	8.76	Fo	3	..	3757oi
7	2025	28.7	-12 54	8.9	8.7	B	2	R	12673b	57	1719	29.0	+ 3 35	5.82	5.82	Ao	..	1,7 R	56,84
8	1892	28.7	-15 14	8.30	8.06	B	4	R	18983b	58	1849	29.0	+ 1 20	8.7	9.7	Ko	1	..	12772b
9	1895	28.7	-15 51	9.1	9.1	Ao	4	..	24594b	59	1848	29.0	+ 1 3	8.49	9.27	G5	1	..	3758oi
10	2030	28.7	-17 26	9.7	10.7	Ko	2	..	24594b	60	2001	29.0	- 4 34	9.1	9.6	F8	2	..	20802b
11	2029	28.7	-17 37	9.1	9.1	Ao	5	..	18288b	61	1975	29.0	- 8 39	9.1	9.5	F5	5	0,2	44418b
12	3659	28.7	-35 45	6.28	6.4	B9	6	1,10	11110b	62	2092	29.0	-13 34	10.0	10.0	Ao	2	..	24594b
13	3658	28.7	-37 22	9.7	10.5	Ko	2	..	20670b	63	2090	29.0	-13 42	10.4	10.4	Ao	2	..	24594b
14	3211	28.7	-40 38	9.2	9.6	Ko	3	..	20671b	64	1899	29.0	-15 31	9.1	9.1	Ao	2	..	18983b
15	288	28.8	+76 30	9.0	10.0	Ko	2	..	38187i	65	2015	29.0	-17 4	9.3	9.3	Ao	3	..	18288b
16	432	28.8	+69 33	8.19	9.19	Ko	4	5,3	38155i	66	1945	29.0	-20 3	9.7	9.2	A3	2	..	18288b
17	1050	28.8	+58 10	8.9	9.3	F5	4	3,2	37526i	67	2017	29.0	-20 8	9.2	9.2	K5	2	..	18288b
18	1620	28.8	+31 11	5.34	6.34	Ko	8	..	37448i	68	2002	29.0	-22 5	8.7	8.8	Go	5	..	18301b
19	..	28.8	+17 7	..	..	F8	2	..	3757oi	69	4502	29.0	-28 7	7.8	7.4	B3	4	..	20856b
20	1745	28.8	+ 4 27	9.2	9.2	Ao	3	..	12755b	70	4134	29.0	-32 47	9.9	8.8	Go	2	..	42915b
21	1999	28.8	- 4 44	10.0	10.0	Ao	1	..	20802b	71	3214	29.0	-41 0	9.5	9.8	Ko	3	..	20671b
22	2175	28.8	- 6 44	9.7	9.8	A2	2	..	44418b	72	2816	29.0	-50 8	10.0	9.7	B9	4	..	24589b
23	1973	28.8	- 8 9	9.1	9.2	A2	3	1,1-	44418b	73	2544	29.0	-51 23	9.2	9.4	Ko	4	..	24589b
24	2104	28.8	- 9 39	10.1	10.1	B9	2	..	44418b	74	1208	29.0	-52 29	10.2	10.2	Ao	2	..	24589b
25	1966	28.8	-14 7	6.24	6.12	B5	6	0,10	2399b	75	1363	29.0	-56 38	9.0	8.9	Ao	3	..	24589b
26	..	28.8	-17 14	..	..	B9	2	..	24594b	76	925	29.0	-58 14	8.8	9.9	Ko	1	..	12757b
27	4499	28.8	-28 12	9.5	8.4	B8	2	..	20856b	77	651	29.0	-68 22	9.1	10.1	Ko	2	..	15223b
28	3905	28.8	-33 52	10.8	10.8	K	1	..	20670b	78	445	29.0	-75 23	7.98	8.8	Ko	8	..	20652b
29	3661	28.8	-35 21	9.9	10.2	Ko	2	..	20670b	79	264	29.0	-78 18	9.8	10.6	G5	2	..	20652b
30	3659	28.8	-37 57	8.6	8.4	Ao	6	..	18435b	80	499	29.1	+67 16	8.4	8.7	Fo	6	..	37713i
31	1352	28.8	-53 20	10.3	10.3	Ao	1	..	24589b	81	1159	29.1	+54 36	8.11	8.53	F5	4	..	37526i
32	600	28.8	-72 53	8.6	9.6	Ko	5	..	15168b	82	1530	29.1	+30 27	8.6	9.2	Go	2	..	37569i
33	516	28.9	+66 47	9.2	9.7	F8	3	..	37713i	83	1419	29.1	+28 51	7.02	7.10	A3	7	..	37569i
34	1087	28.9	+57 41	8.0	9.0	Ko	3	5,2	37526i	84	1640	29.1	+21 32	9.4	9.4	Ao	2	..	37472i
35	1711	28.9	+43 15	6.30	6.58	Fo	10	..	37463i	85	1668	29.1	+17 56	9.7	9.7	A	2	R	3757oi
36	1705	28.9	+24 29	7.91	9.26	Ma	2	..	38172i	86	1616	29.1	+11 18	9.7	11.1	Mb	..	..	M
37	1700	28.9	+ 2 50	9.0	9.0	B8	5	..	12755b	87	2178	29.1	- 2 37	9.1	9.2	A2	2	..	20802b
38	1997	28.9	-12 4	9.0	9.0	Ao	3	..	44418b	88	2002	29.1	- 4 21	9.3	9.3	Ao	3	..	20802b
39	2089	28.9	-13 50	10.6	11.4	G5	1	..	24594b	89	2106	29.1	- 9 28	8.5	8.6	A5	3	..	12673b
40	1903	28.9	-18 21	10.6	10.9	Fo	2	..	24594b	90	1969	29.1	-14 13	9.2	9.2	B9	4	..	24594b
41	1944	28.9	-19 12	5.76	7.3	Ko	..	0,5-	56,84	91	5677	29.1	-23 47	10.7	9.6	K2	1	..	44433b
42	2015	28.9	-20 30	8.7	8.3	B8	6	..	18301b	92	4690	29.1	-25 11	9.5	9.2	Ao	3	..	44433b
43	2001	28.9	-21 43	9.1	8.6	Ao	5	..	18301b	93	4681	29.1	-30 3	10.2	9.2	B9	2	..	42915b
44	5673	28.9	-23 43	8.3	7.6	B5	4	..	42935b	94	4690	29.1	-31 15	8.9	9.2	K5	2	..	42915b
45	5566	28.9	-24 30	5.74	6.4	A3	..	0,7	56,123	95	3691	29.1	-34 28	10.3	9.9	Ao	4	..	20670b
46	4675	28.9	-31 2	8.9	9.1	A5	3	..	42915b	96	3702	29.1	-36 25	10.3	10.5	Ko	1	..	20670b
47	3908	28.9	-33 13	10.3	9.1	A	3	E	20670b	97	3440	29.1	-38 46	9.3	9.0	A2	3	..	18435b
48	3686	28.9	-34 28	9.3	10.1	Ko	2	..	20670b	98	3216	29.1	-40 28	9.5	9.1	Ao	4	..	20671b
49	3699	28.9	-36 53	9.9	9.4	B8	5	..	20670b	99	2817	29.1	-50 25	9.2	9.7	Fo	4	..	24589b
50	3213	28.9	-40 43	9.3	10.2	Ko	2	..	20671b	100	2820	29.1	-51 1	9.2	9.1	B9	4	..	24589b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

60400

7<sup>h</sup> 29<sup>m</sup>.1

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1258	29.1	55 58	8.4	9.4	G5	2	..	24589b	51	4685	29.3	30 21	10.4	9.2	Ao	2	..	42915b
2	834	29.1	61 12	8.7	9.3	Go	2	..	18486b	52	3914	29.3	33 50	8.6	8.2	Ao	7	..	42915b
3	259	29.2	+78 6	9.2	9.8	G	1	..	38331i	53	3913	29.3	34 0	9.2	8.2	B9	5	..	42915b
4	293	29.2	+76 59	8.2	8.5	Fo	5	..	37559i	54	2821	29.3	50 35	10.2	10.2	Fo	2	..	24589b
5	312	29.2	+75 47	7.37	8.15	G5	6	..	37559i	55	313	29.3	77 14	9.8	9.9	A3	6	..	20652b
6	983	29.2	+61 46	7.17	7.59	F5	6	0,8	37676i	56	1639	29.4	+34 32	8.8	9.1	Fo	3	0,3	37569i
7	1601	29.2	+26 48	8.5	9.5	Ko	2	..	38172i	57	1670	29.4	+18 4	9.0	9.4	F5	1	..	37570i
8	1760	29.2	+23 16	7.22	8.00	G5	5	..	37472i	58	1619	29.4	+11 14	8.5	9.5	Ko	1	..	37581i
9	1617	29.2	+11 47	8.58	8.66	A3	4	..	37570i	59	2105	29.4	11 2	8.0	8.5	F8	3	..	12673b
10	2179	29.2	2 44	9.2	9.3	A2	2	..	20802b	60	2019	29.4	16 50	10.6	10.6	Ao	1	..	24594b
11	2041	29.2	7 26	7.63	8.63	Ko	4	..	20802b	61	2035	29.4	17 21	10.1	10.4	Fo	2	..	24594b
12	1977	29.2	9 3	9.2	9.2	A	3	R	44418b	62	5576	29.4	24 6	9.0	8.3	B8	4	..	18301b
13	2096	29.2	13 49	9.1	9.1	Ao	4	..	24594b	63	4515	29.4	28 29	8.7	8.0	B9	4	..	20856b
14	1971	29.2	14 18	5.06	6.24	B	6	R	38671i	64	4560	29.4	29 37	8.9	9.4	K5	1	..	42915b
15	1971	29.2	14 18	5.06	6.24	B	6	R	38671i	65	3706	29.4	36 17	9.3	9.3	Ao	2	..	42915b
16	1970	29.2	14 57	8.71	9.27	Go	5	..	24594b	66	3223	29.4	40 11	10.8	9.3	A2	3	..	20671b
17	1900	29.2	15 48	10.4	11.4	Ko	1	..	24594b	67	2546	29.4	51 6	9.8	9.7	A5	3	..	24589b
18	2033	29.2	17 48	9.1	9.6	F8	3	..	18288b	68	1248	29.4	57 22	8.6	10.0	Ko	1	..	12757b
19	1907	29.2	18 24	9.3	9.3	Ao	3	..	18288b	69	372	29.5	+72 35	8.7	9.3	Go	3	..	37559i
20	1905	29.2	18 52	9.1	9.5	F5	3	..	18288b	70	1227	29.5	+52 25	8.6	9.2	Go	1	..	37515i
21	1906	29.2	19 0	9.3	9.3	Ao	3	..	18288b	71	1846	29.5	+20 3	8.80	8.80	A	2	..	37570i
22	2004	29.2	21 26	9.1	9.0	B9	3	..	18301b	72	1671	29.5	+18 31	8.3	8.7	F5	3	..	37570i
23	1928	29.2	23 3	9.2	8.9	Ao	3	..	18301b	73	1615	29.5	+17 34	9.0	9.5	F8	1	..	37570i
24	4540	29.2	26 51	8.9	9.0	Ko	2	..	20856b	74	1567	29.5	+10 11	8.3	9.1	G5	3	..	37581i
25	4556	29.2	29 34	10.7	9.2	A5	3	..	42915b	75	1997	29.5	+0 23	7.8	7.8	B9	4	..	37580i
26	3693	29.2	34 23	10.8	10.4	K5	2	..	20670b	76	2032	29.5	12 50	8.3	8.3	B9	5	..	12673b
27	3666	29.2	35 23	9.7	9.6	A	3	..	42915b	77	1902	29.5	15 34	9.3	10.3	Ko	2	..	24594b
28	3704	29.2	36 36	10.6	10.5	G5	2	..	20670b	78	5582	29.5	24 56	9.7	9.5	A3	2	..	44433b
29	3388	29.2	39 47	8.21	8.1	B5	4	..	20785b	79	4229	29.5	27 45	8.9	8.0	B	3	..	20856b
30	3318	29.2	42 22	9.8	9.8	G5	3	..	20671b	80	3321	29.5	42 5	10.5	9.8	F2	2	..	20671b
31	3219	29.2	46 43	8.8	8.4	B3	6	..	20786b	81	3324	29.5	43 38	9.6	9.9	Ko	1	..	20671b
32	2819	29.2	50 29	9.6	9.7	Fo	3	..	24589b	82	1298	29.5	54 18	8.7	9.5	G5	3	..	24589b
33	1353	29.2	53 39	9.0	9.4	Ao	5	..	24589b	83	763	29.5	67 56	8.7	9.3	Go	3	..	15223b
34	1364	29.2	56 24	7.9	8.8	Ko	5	..	24589b	84	453	29.5	76 59	9.1	10.2	K2	5	..	20652b
35	1246	29.2	57 47	8.2	8.9	A3	2	..	18486b	85	1653	29.6	+35 12	8.7	9.0	F2	2	..	37569i
36	1160	29.3	+54 4	7.36	8.36	Ko	4	..	37526i	86	1623	29.6	+30 56	8.7	9.5	G5	3	..	37569i
37	1286	29.3	+46 24	5.80	6.98	K5	8	R	37463i	87	1617	29.6	+17 36	7.6	8.4	G5	3	5,2	37570i
38	1713	29.3	+42 59	9.0	9.0	Ao	1	..	37463i	88	1772	29.6	+7 4	8.3	9.4	K2	3	..	37581i
39	1652	29.3	+35 5	8.0	8.1	A3	4	..	37448i	89	1723	29.6	+2 56	6.48	6.56	A3	6	R	37580i
40	1844	29.3	+20 32	8.8	9.8	K	1	..	37570i	90	1703	29.6	+2 39	7.7	8.7	Ko	4	..	37580i
41	1707	29.3	+13 14	8.7	9.7	Ko	2	..	37570i	91	2184	29.6	6 41	8.0	9.0	Ko	4	..	20802b
42	1765	29.3	1 6	7.9	8.7	G5	3	..	37580i	92	1903	29.6	15 50	9.5	10.5	Ko	3	..	24594b
43	2168	29.3	5 44	9.2	9.3	A3	3	..	20802b	93	2020	29.6	16 38	9.5	9.8	Fo	3	..	24594b
44	2042	29.3	8 3	10.1	10.1	B9	2	..	44418b	94	2037	29.6	17 36	9.1	9.1	B9	4	..	18288b
45	2108	29.3	9 33	9.5	10.5	Ko	1	..	44418b	95	2025	29.6	20 36	9.3	9.3	B9	3	..	18301b
46	2104	29.3	10 50	8.5	8.5	Ao	3	..	12673b	96	5585	29.6	24 32	9.3	8.9	Ko	4	..	18301b
47	2097	29.3	13 29	8.7	9.2	F8	5	..	24594b	97	4145	29.6	32 24	10.1	9.4	A	1	..	42915b
48	1973	29.3	15 5	8.61	8.59	B9	3	..	18983b	98	3915	29.6	33 11	7.12	7.2	B3	3	..	11110b
49	2034	29.3	17 38	9.7	10.0	Fo	2	..	24594b	99	1250	29.6	57 43	7.0	7.9	Ko	5	..	12757b
50	5686	29.3	23 15	10.0	8.6	B9	4	..	18301b	100	1900	29.7	+40 21	9.1	9.5	F5	1	..	37463i

## THE HENRY DRAPER CATALOGUE.

60500

7<sup>h</sup> 29<sup>m</sup>.7

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1720	29.7 + 6 24	7.7	9.1	Ma	3	..	3758oi	51	2036	29.9 - 12 38	8.3	9.4	K2	1	..	12673b		
2	1713	29.7 + 5 31	7.3	7.3	B9	5	..	3758oi	52	2101	29.9 - 13 39	6.70	7.12	F5	7	..	12673b		
3	1751	29.7 + 4 39	7.00	8.00	Ko	5	..	3758oi	53	1950	29.9 - 19 55	6.81	6.9	B3	..	0,7-	56,84		
4	1724	29.7 + 3 34	7.7	8.5	G5	3	..	3758oi	54	5596	29.9 - 24 21	10.0	9.2	Go	2	..	44433b		
5	1705	29.7 + 2 34	9.0	9.0	Ao	3	..	12755b	55	4522	29.9 - 28 21	6.61	7.1	Fo	5	..	8905b		
6	1998	29.7 + 0 21	8.5	9.0	F8	2	..	3758oi	56	4706	29.9 - 30 10	8.05	8.5	Fo	6	..	42915b		
7	2185	29.7 - 6 11	8.9	8.9	Ao	2	..	20802b	57	3711	29.9 - 36 7	9.9	9.6	Ao	2	..	42915b		
8	2114	29.7 - 9 39	8.1	8.9	G5	2	..	12673b	58	3710	29.9 - 36 42	10.6	10.4	G5	2	..	20670b		
9	2113	29.7 - 9 50	9.7	9.7	Ao	1	..	44418b	59	3398	29.9 - 39 50	6.28	5.8	B8	8	..	42928b		
10	2001	29.7 - 11 20	9.1	9.1	Ao	2	..	12673b	60	1300	29.9 - 54 47	8.9	10.0	K5	2	..	24589b		
11	2099	29.7 - 13 54	10.4	10.5	A2	1	..	24594b	61	1656	30.0 + 35 39	8.4	8.4	B9	4	..	37569i		
12	1976	29.7 - 14 55	10.6	10.7	A2	1	..	24594b	62	1673	30.0 + 18 32	8.7	9.5	G5	1	..	3757oi		
13	1904	29.7 - 15 59	6.89	7.67	G5	4	5,3	8903b	63	1773	30.0 + 7 48	6.62	6.62	Ao	8	..	37581i		
14	2039	29.7 - 17 38	10.6	10.6	Ao	1	..	24594b	64	1854	30.0 + 1 34	9.0	9.0	Ao	3	0,3	12755b		
15	1912	29.7 - 18 18	9.5	9.5	Ao	2	..	18288b	65	2188	30.0 - 2 8	8.52	9.52	Ko	1	R	12772b		
16	3699	29.7 - 34 49	9.5	9.4	Ao	3	..	42915b	66	2048	30.0 - 7 20	9.6	9.6	Ao	2	..	44418b		
17	2901	29.7 - 49 38	8.5	9.2	G5	5	..	24589b	67	2047	30.0 - 7 41	9.2	10.0	G5	2	..	44418b		
18	743	29.7 - 69 42	9.2	9.3	A5	2	..	15274b	68	2111	30.0 - 10 55	8.9	9.0	A5	4	..	44418b		
19	468	29.8 + 70 31	8.8	9.8	Ko	2	..	37559i	69	1979	30.0 - 14 50	9.4	10.5	K2	1	..	24594b		
20	1288	29.8 + 46 5	9.0	9.8	G5	1	..	37463i	70	1977	30.0 - 14 52	9.4	10.4	Ko	2	..	24594b		
21	1554	29.8 + 33 3	8.0	8.6	Go	5	..	37569i	71	4525	30.0 - 28 26	9.2	8.6	B8	3	..	20856b		
22	1424	29.8 + 27 7	4.22	5.40	K5	..	0, R	1618c	72	3703	30.0 - 34 23	9.9	9.3	Ao	4	..	42915b		
23	1713	29.8 + 25 7	8.2	9.2	Ko	2	..	38172i	73	3229	30.0 - 40 30	9.7	9.8	A	2	..	20671b		
24	1605	29.8 + 12 4	8.1	8.4	Fo	4	0,4	3757oi	74	3325	30.0 - 42 52	6.42	7.5	Ko	2	5,8	42162b		
25	1569	29.8 + 10 20	8.3	8.3	B8	4	..	37581i	75	3023	30.0 - 48 59	8.5	7.4	B5	6	..	20786b		
26	1725	29.8 + 3 30	7.7	8.5	G5	5	..	3758oi	76	195	30.1 + 82 57	9.2	9.5	F	2	..	3833oi		
27	1959	29.8 - 3 25	8.4	9.4	Ko	2	..	12772b	77	260	30.1 + 78 0	9.5	10.1	G	1	..	38331i		
28	1984	29.8 - 8 28	9.2	9.3	A5	5	5,3	44418b	78	643	30.1 + 64 53	8.90	9.32	F5	2	..	37713i		
29	2108	29.8 - 10 8	9.2	9.3	A2	3	..	44418b	79	1723	30.1 + 5 54	8.7	9.0	Fo	3	..	12755b		
30	2003	29.8 - 12 3	9.0	10.1	K2	2	..	44418b	80	2000	30.1 + 0 44	7.74	8.52	G5	3	..	3758oi		
31	2035	29.8 - 12 9	8.7	9.9	K5	2	..	44418b	81	2009	30.1 - 4 36	9.4	9.4	Ao	2	..	20802b		
32	2007	29.8 - 22 5	4.52	5.02	F8	..	3,10	28,200	82	2115	30.1 - 9 41	10.1	10.1	Ao	2	..	44418b		
33	1932	29.8 - 22 28	9.7	9.3	B9	2	..	18301b	83	1905	30.1 - 15 15	10.2	10.2	Ao	2	..	24594b		
34	5700	29.8 - 23 19	10.4	8.6	B8	4	..	18301b	84	5709	30.1 - 23 15	5.86	5.8	F2	..	R	56,123		
35	5698	29.8 - 23 29	8.9	7.4	B9	4	..	42935b	85	4578	30.1 - 23 15	6.01	9.1	F2	..	R	56,123		
36	4569	29.8 - 29 4	9.0	8.6	B8	4	..	42915b	86	4578	30.1 - 30 0	9.45	9.1	Ao	2	..	42915b		
37	3227	29.8 - 40 19	8.6	9.0	G5	4	..	20671b	87	3712	30.1 - 36 13	9.5	8.7	Ao	3	..	42915b		
38	3157	29.8 - 41 15	8.3	9.6	K5	3	..	20671b	88	3331	30.1 - 43 33	9.6	9.9	Ko	3	..	20671b		
39	3326	29.8 - 43 25	10.0	9.4	A3	3	..	20671b	89	1212	30.1 - 52 28	9.7	10.3	Go	2	..	24589b		
40	2902	29.8 - 49 28	10.0	10.0	A2	2	..	24589b	90	1261	30.1 - 55 27	8.9	10.0	K2	1	..	24589b		
41	1368	29.8 - 56 53	10.0	10.0	A	1	E	24589b	91	517	30.2 + 66 30	8.6	8.6	Ao	5	..	37713i		
42	652	29.8 - 68 10	9.5	10.1	Go	1	..	15223b	92	1657	30.2 + 35 37	8.8	9.1	Fo	2	..	37569i		
43	454	29.8 - 76 27	9.4	10.0	Go	4	..	20652b	93	1676	30.2 + 18 20	9.2	10.0	G5	1	..	3757oi		
44	289	29.9 + 76 38	9.4	9.5	A2	2	..	38187i	94	2010	30.2 - 4 11	8.5	8.9	F5	4	..	20802b		
45	1553	29.9 + 48 16	9.0	9.6	G	1	E	37515i	95	2114	30.2 - 10 24	8.4	8.4	Ao	4	..	12673b		
46	1420	29.9 + 28 51	9.4	10.0	G	1	..	37569i	96	2113	30.2 - 10 36	9.1	9.1	Ao	3	..	12673b		
47	1518	29.9 + 15 59	8.5	9.0	F8	2	..	3757oi	97	2103	30.2 - 13 45	9.8	9.9	A2	2	..	24594b		
48	1816	29.9 + 8 44	8.09	8.87	G5	2	..	37581i	98	1906	30.2 - 15 40	10.5	10.5	Ao	2	..	24594b		
49	2173	29.9 - 5 13	8.55	8.55	Ao	3	..	20802b	99	2025	30.2 - 17 5	9.8	9.8	B9	3	1,2	24594b		
50	1985	29.9 - 8 11	9.5	9.6	A2	1	..	20802b	100	2033	30.2 - 20 48	8.9	9.2	Ao	3	..	18301b		

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

60600

7<sup>h</sup> 30<sup>m</sup>.2

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	2037	30.2	-21 6	7.5	7.6	A2	4	2,8	8903b	51	447	30.4	-75 32	9.7	10.2	F8	3	..	20652b
2	4532	30.2	-28 37	9.3	8.9	G5	3	5,1	44428b	52	1653	30.5	+48 59	5.92	6.00	A3	8	..	37515i
3	3709	30.2	-34 47	8.6	9.3	G5	2	..	42915b	53	1459	30.5	+45 18	8.27	8.61	F2	6	..	37463i
4	3681	30.2	-35 36	8.6	9.4	Ko	3	..	42915b	54	1903	30.5	+40 14	6.57	7.92	Ma	7	..	37463i
5	3680	30.2	-35 46	9.2	9.6	Go	3	..	42915b	55	1658	30.5	+35 28	9.4	9.5	A5	2	..	37569i
6	3715	30.2	-36 7	5.51	5.39	B5p	..	R	56,123	56	2013	30.5	-4 58	8.90	9.90	Ko	3	..	44418b
7	3454	30.2	-38 30	10.8	9.8	A	2	E	20670b	57	2175	30.5	-5 46	9.2	9.2	Ao	2	..	20802b
8	3236	30.2	-40 51	10.3	9.8	Fo	2	..	20671b	58	2117	30.5	-9 18	9.1	9.2	A2	3	0,3	12673b
9	749	30.2	-63 13	8.5	9.6	K2	3	..	18486b	59	2107	30.5	-13 50	9.8	9.8	Ao	3	..	24594b
10	655	30.2	-70 35	9.5	9.9	F5	2	..	15168b	60	1982	30.5	-14 50	9.4	10.4	Ko	3	..	24594b
11	583	30.2	-71 47	9.0	9.8	G5	3	..	15168b	61	2043	30.5	-17 17	9.1	9.7	Go	4	..	18288b
12	249	30.3	+79 28	8.6	9.6	Ko	1	..	37493i	62	2045	30.5	-18 1	9.4	9.4	Ao	2	..	18288b
13	518	30.3	+66 16	8.6	9.2	G	3	..	37713i	63	1917	30.5	-18 38	9.8	10.8	Ko	2	..	24594b
14	1210	30.3	+55 25	7.8	8.2	F5	5	..	37526i	64	1918	30.5	-18 46	9.1	10.3	K5	1	..	18288b
15	1648	30.3	+44 50	8.17	8.17	Ao	7	..	37463i	65	1938	30.5	-22 34	8.4	7.7	B9	3	..	42935b
16	1902	30.3	+39 58	8.62	9.62	K	1	..	37463i	66	4574	30.5	-26 48	5.85	6.7	Ko	6	..	42935b
17	1642	30.3	+34 31	10.0	10.3	F	2	..	37569i	67	4539	30.5	-28 29	9.5	8.4	Ao	2	..	20856b
18	1533	30.3	+30 0	8.21	8.55	F2	4	..	37569i	68	3680	30.5	-37 6	7.9	8.1	B8	3	..	42928b
19	1772	30.3	+18 57	9.0	9.0	A	2	..	37570i	69	3238	30.5	-40 42	9.5	9.0	B9	3	..	20671b
20	1752	30.3	+4 12	7.7	7.7	B9	7	..	37580i	70	3332	30.5	-42 36	9.8	9.3	F5	2	..	20671b
21	1708	30.3	+2 6	8.3	9.1	G5	2	..	37580i	71	3236	30.5	-46 33	9.8	9.4	A2	1	..	20858b
22	2011	30.3	-4 24	9.1	9.1	Ao	4	..	20802b	72	1214	30.5	-53 2	10.3	11.1	G5	1	..	24589b
23	1987	30.3	-8 50	9.2	9.2	B9	2	..	20802b	73	838	30.5	-61 28	8.5	9.3	G5	2	..	18486b
24	2104	30.3	-13 57	8.1	8.1	B9	5	..	12673b	74	728	30.5	-64 9	8.2	8.6	F5	7	..	18486b
25	1907	30.3	-15 26	9.2	9.3	A3	4	..	18983b	75	1775	30.6	+19 27	8.7	9.5	G5	2	..	37570i
26	1915	30.3	-18 14	9.6	10.4	G5	1	..	18288b	76	1681	30.6	+18 24	7.7	7.8	A2	5	0,5	37472i
27	2036	30.3	-20 14	8.60	9.8	Ko	3	..	18301b	77	1609	30.6	+15 49	9.2	9.3	A3	2	..	37570i
28	1933	30.3	-22 58	10.1	9.3	A2	2	..	18301b	78	1730	30.6	+3 51	8.1	8.1	B9	4	..	37580i
29	4719	30.3	-25 54	6.50	6.5	Ao	..	1,7	28,200	79	2055	30.6	-7 34	9.1	9.2	A2	2	..	20802b
30	2830	30.3	-50 34	9.4	9.7	Go	6	..	24589b	80	2029	30.6	-16 25	10.3	10.4	A2	2	..	24594b
31	1213	30.3	-52 58	10.0	10.6	G	1	..	24589b	81	2046	30.6	-17 18	9.6	9.6	Ao	2	0,1	24594b
32	438	30.3	-74 53	9.2	10.2	Ko	3	..	20652b	82	1954	30.6	-19 27	8.7	8.7	A2	3	..	18301b
33	1691	30.4	+41 5	7.8	8.6	G5	6	..	37463i	83	4727	30.6	-25 48	8.0	8.3	G5	5	0,3	18301b
34	1678	30.4	+18 27	8.7	8.7	Ao	3	..	37570i	84	4159	30.6	-32 46	8.9	8.8	Ao	3	..	42909b
35	1707	30.4	+2 45	9.0	10.1	K2	2	..	12755b	85	3688	30.6	-35 21	8.9	8.7	Fo	5	..	42915b
36	1963	30.4	-3 40	9.2	9.3	A2	1	..	12772b	86	3407	30.6	-39 41	6.62	7.8	Ko	2	..	42928b
37	1989	30.4	-8 53	9.4	9.8	F5	2	..	44418b	87	3334	30.6	-42 53	6.9	7.6	K5	4	..	20785b
38	1980	30.4	-14 44	9.2	10.3	K2	2	..	24594b	88	2554	30.6	-51 13	10.0	9.1	A2	4	..	24589b
39	2027	30.4	-16 54	8.6	8.9	F2	5	..	18288b	89	2555	30.6	-51 30	9.0	9.1	F8	6	..	24589b
40	2039	30.4	-20 46	8.7	9.8	Ko	2	..	18301b	90	1215	30.6	-52 13	9.2	9.2	Ao	6	..	24589b
41	2014	30.4	-22 2	9.6	10.1	K2	2	..	44433b	91	842	30.6	-59 4	9.0	9.3	Ao	2	..	15516b
42	1935	30.4	-22 33	10.1	9.2	B9	2	..	18301b	92	469	30.7	+70 30	9.0	9.1	A3	2	..	37559i
43	1936	30.4	-22 59	8.9	9.2	Go	3	..	18301b	93	1231	30.7	+52 4	7.7	8.1	F5	3	3,3	37334i
44	4250	30.4	-28 2	9.0	8.7	B9	2	..	20856b	94	1978	30.7	+39 5	7.8	7.8	Ao	5	..	37463i
45	4537	30.4	-28 14	9.0	8.7	B8	2	..	20856b	95	1820	30.7	+8 0	8.4	9.4	Ko	1	..	37581i
46	3926	30.4	-33 15	6.14	6.8	Fo	5	..	11110b	96	1725	30.7	+6 27	8.1	8.7	Go	3	..	37581i
47	3683	30.4	-35 3	9.5	9.9	A5	2	..	42915b	97	2007	30.7	+0 54	9.4	9.5	A2	1	..	37580i
48	3129	30.4	-47 35	9.2	9.7	F5	1	..	20786b	98	1966	30.7	-3 59	8.7	8.8	A2	7	..	20802b
49	1357	30.4	-53 20	7.1	7.7	B8	3	..	8951b	99	2047	30.7	-17 13	10.1	10.9	G5	1	..	24594b
50	706	30.4	-66 8	9.1	10.1	Ko	3	..	15223b	100	2048	30.7	-17 20	7.5	8.3	G5	3	5,10	8903b

## THE HENRY DRAPER CATALOGUE.

60700

7<sup>h</sup> 30<sup>m</sup>.7

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	2017	30.7	-21 13	10.5	9.8	A2	2	..	18288b	51	4165	30.9	-32 13	8.9	9.4	G5	2	..	42915b
2	1939	30.7	-22 29	9.6	9.2	K2	2	..	18301b	52	3239	30.9	-46 31	7.9	8.7	F5	6	..	20786b
3	4545	30.7	-28 35	10.2	8.9	Ao	2	..	44428b	53	2835	30.9	-50 22	6.82	6.9	B5	4	..	8951b
4	4739	30.7	-31 55	10.0	8.9	Fo	3	..	42915b	54	1718	31.0	+24 7	8.4	9.4	Ko	1	..	38172i
5	4162	30.7	-32 15	8.9	8.5	A2	3	..	42915b	55	1852	31.0	+20 43	8.6	9.4	G5	2	E	3757oi
6	3409	30.7	-39 28	9.9	9.8	A	1	..	20670b	56	1713	31.0	+2 29	8.7	9.8	K2	2	..	12755b
7	3340	30.7	-43 27	10.2	9.9	Fo	2	..	20671b	57	1968	31.0	-3 9	8.1	8.1	Ao	3	..	18560b
8	1302	30.7	-54 25	10.3	10.3	Ao	2	..	24589b	58	2057	31.0	-8 1	8.4	8.5	A2	4	..	20802b
9	1303	30.7	-54 57	9.0	9.1	A5	5	R	24589b	59	1991	31.0	-8 8	7.9	8.0	A2	7	..	20802b
10	771	30.7	-65 24	9.0	10.2	K5	3	..	15223b	60	2111	31.0	-13 37	8.6	9.6	Ko	4	..	24594b
11	653	30.7	-68 47	9.1	9.2	A2	4	..	15223b	61	1985	31.0	-14 14	10.1	10.2	A2	3	..	24594b
12	1462	30.8	+44 57	8.37	8.71	F2	5	..	37463i	62	1986	31.0	-14 36	9.8	9.9	A2	3	..	24594b
13	1535	30.8	+30 13	8.6	8.9	Fo	4	..	37569i	63	2046	31.0	-20 39	10.1	9.8	Ao	2	..	18288b
14	1716	30.8	+25 13	8.6	8.9	Fo	3	..	38172i	64	4739	31.0	-25 5	9.05	8.9	F8	4	..	44433b
15	1776	30.8	+19 12	9.0	9.0	Ao	3	..	3757oi	65	4738	31.0	-25 53	8.3	8.7	Ko	4	5,2	18301b
16	1524	30.8	+16 17	8.4	9.2	G5	2	..	3757oi	66	4557	31.0	-28 16	9.0	7.5	Fo	6	..	20856b
17	2121	30.8	-9 34	8.6	8.6	Ao	2	..	12673b	67	1217	31.0	-52 57	9.9	11.1	K5	1	..	24589b
18	2109	30.8	-13 50	7.9	8.7	G5	3	..	12673b	68	1307	31.0	-54 25	10.5	10.5	Ao	1	..	24589b
19	1913	30.8	-15 17	9.4	10.0	Go	2	..	24594b	69	771	31.0	-67 36	9.2	9.8	Go	2	..	15223b
20	2031	30.8	-16 11	8.6	9.7	K2	3	..	18288b	70	331	31.1	+74 36	9.2	10.0	G5	2	..	37559i
21	2050	30.8	-17 11	9.0	9.3	F2	5	..	18288b	71	1979	31.1	+39 5	7.10	7.24	A5	2	..	37463i
22	1921	30.8	-18 41	8.7	9.0	F2	5	..	18288b	72	1562	31.1	+29 25	9.0	9.0	Ao	3	..	37569i
23	1956	30.8	-19 31	9.1	9.0	Ao	2	..	18301b	73	1646	31.1	+21 22	9.0	9.1	A5	2	..	37494i
24	4582	30.8	-27 1	9.3	8.7	Ao	2	..	20856b	74	1777	31.1	+19 49	8.90	8.90	Ao	3	..	3757oi
25	4596	30.8	-29 11	7.4	8.5	Ko	5	..	42915b	75	1629	31.1	+11 0	9.0	9.8	G5	1	..	3758ri
26	3717	30.8	-34 42	9.9	9.6	Ao	2	..	20670b	76	1780	31.1	+7 33	7.7	7.8	A2	6	0,5	3758ri
27	3685	30.8	-37 27	11.0	10.1	A	2	R	20670b	77	1733	31.1	+3 0	7.9	8.9	Ko	3	..	3758oi
28	3244	30.8	-40 41	10.1	9.4	Ao	2	..	20671b	78	2011	31.1	+0 4	9.0	9.0	Ao	2	..	3758oi
29	3169	30.8	-41 25	8.7	9.4	K2	4	..	20671b	79	2197	31.1	-2 56	7.10	7.88	G5	3	..	18560b
30	3170	30.8	-41 35	8.9	9.1	Ao	6	..	20671b	80	2190	31.1	-7 3	8.3	8.3	Ao	6	..	20802b
31	3134	30.8	-47 45	9.2	9.6	G5	1	..	20786b	81	1990	31.1	-14 6	9.6	9.7	A2	3	..	24594b
32	2836	30.8	-50 59	10.2	10.2	K2	1	..	24589b	82	1987	31.1	-14 28	9.1	9.1	Ao	3	..	18983b
33	1304	30.8	-54 44	9.0	10.0	Ko	3	..	24589b	83	2034	31.1	-16 46	9.8	9.9	A2	4	0,2	24594b
34	1305	30.8	-54 57	7.9	8.5	F8	7	R	24589b	84	..	31.1	-17 35	..	..	A2	1	..	24594b
35	1257	30.8	-57 9	8.9	8.8	A5	4	..	12757b	85	1958	31.1	-19 36	9.4	9.3	B8	2	..	18301b
36	770	30.8	-67 19	9.4	10.2	G5	1	..	15223b	86	2048	31.1	-20 17	8.5	8.7	Ao	5	..	18301b
37	1555	30.9	+47 59	7.59	8.15	Go	3	..	37515i	87	2049	31.1	-21 3	10.1	10.3	Ao	1	..	18288b
38	1712	30.9	+13 8	9.2	10.0	G5	2	..	3757oi	88	5736	31.1	-23 23	10.4	9.0	Ao	3	..	18301b
39	1778	30.9	+7 39	9.4	9.4	A	1	..	37581i	89	5626	31.1	-24 44	9.3	9.3	Ma	2	..	18301b
40	2124	30.9	-9 49	9.1	10.2	K2	2	..	44418b	90	4743	31.1	-25 25	10.2	8.7	A2	5	2,2	44433b
41	1984	30.9	-14 51	9.2	9.6	F5	4	..	24594b	91	3173	31.1	-41 51	7.5	7.8	Ao	3	..	42928b
42	1914	30.9	-15 10	7.31	8.49	K5	4	..	18983b	92	3281	31.1	-45 40	8.6	9.3	Ko	2	..	20786b
43	1915	30.9	-15 24	8.6	9.7	K2	3	..	24594b	93	3280	31.1	-45 46	9.8	9.3	A2	2	..	20786b
44	1916	30.9	-16 0	10.1	10.2	A5	2	..	24594b	94	3242	31.1	-46 25	8.9	8.7	B5	4	..	20786b
45	..	30.9	-16 58	..	..	Ao	1	..	18288b	95	3243	31.1	-46 55	8.4	8.7	F2	6	..	20786b
46	2051	30.9	-17 34	10.1	11.2	K2	1	..	24594b	96	2912	31.1	-49 26	9.2	9.7	Ko	2	..	24589b
47	2053	30.9	-17 42	8.5	9.5	Ko	3	..	18288b	97	2560	31.1	-51 16	9.8	9.5	Fo	3	..	24589b
48	2044	30.9	-20 39	9.6	9.2	Ao	3	..	18301b	98	707	31.1	-66 58	8.7	9.5	G5	5	..	15223b
49	2018	30.9	-22 0	9.8	9.8	A2	2	..	44433b	99	1650	31.2	+44 24	8.6	9.6	Ko	2	..	37463i
50	4741	30.9	-30 59	10.4	9.4	A	2	..	42915b	100	1633	31.2	+31 50	7.60	7.58	B9	6	..	37569i

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

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7<sup>h</sup> 31<sup>m</sup>.2

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
		m.	° ' "									m.	° ' "						
1	1714	31.2	+13 4	7.8	9.2	Ma	3	..	3757oi	51	2193	31.4	- 6 13	9.1	9.2	A2	2	..	20802b
2	1728	31.2	+ 6 22	8.7	9.7	Ko	2	..	12755b	52	2064	31.4	- 7 49	8.7	8.7	Ao	3	..	20802b
3	1729	31.2	+ 6 5	5.94	6.44	F8	7	..	3758oi	53	2065	31.4	- 8 5	6.43	7.50	K2	7	..	20802b
4	2015	31.2	+ 0 24	9.0	9.1	A2	2	..	3758oi	54	2128	31.4	- 9 55	9.8	9.8	Ao	3	..	44418b
5	2178	31.2	- 5 34	8.1	9.1	Ko	2	..	20802b	55	1999	31.4	-14 16	5.57	5.45	B5	7	0,7-	3867ii
6	2061	31.2	- 7 12	9.4	9.4	B9	2	..	44418b	56	1994	31.4	-14 29	8.5	8.5	B9	6	..	18983b
7	1993	31.2	- 9 5	7.7	8.5	G5	7	5,4	44418b	57	2036	31.4	-16 56	9.2	10.2	Ko	1	..	18288b
8	2055	31.2	-17 51	9.8	9.8	Ao	2	..	18288b	58	1922	31.4	-18 20	9.2	9.2	Ao	3	..	18288b
9	2024	31.2	-21 28	8.7	8.4	Ao	7	..	18301b	59	1959	31.4	-19 34	9.1	8.9	B3	4	..	18288b
10	3695	31.2	-35 32	9.3	9.4	Ao	4	..	42915b	60	1946	31.4	-22 18	9.8	9.2	B9	2	..	18301b
11	3691	31.2	-37 40	9.7	9.4	A5	3	..	18435b	61	4750	31.4	-25 55	8.0	7.4	B9	6	..	20856b
12	3463	31.2	-38 37	9.2	9.6	K2	2	..	18435b	62	4603	31.4	-26 24	6.51	6.7	A2	..	2,6	28,200
13	3338	31.2	-42 11	7.9	7.2	A3	3	..	42928b	63	4566	31.4	-28 9	4.55	4.50	B8	..	R	56,84
14	2914	31.2	-49 32	8.4	9.2	Ko	5	..	24589b	64	2838	31.4	-50 26	10.9	10.2	A2	2	..	24589b
15	2562	31.2	-51 54	9.0	10.3	K5	2	..	24589b	65	2837	31.4	-50 39	9.6	9.7	G5	3	..	24589b
16	265	31.2	-78 53	5.42	6.8	K2	..	R	56,124	66	448	31.4	-75 11	8.93	9.1	Fo	7	..	20652b
17	500	31.3	+67 17	8.9	9.7	G5	2	..	37713i	67	725	31.5	+63 45	9.2	10.0	G5	2	E	37676i
18	1167	31.3	+54 7	6.59	6.57	B9	8	..	37526i	68	1731	31.5	+ 6 18	7.9	7.9	B9	4	..	3758oi
19	1647	31.3	+21 35	8.6	9.0	F5	3	..	37472i	69	1859	31.5	+ 1 46	9.4	10.2	G5	2	..	3758oi
20	1856	31.3	+20 23	6.80	7.80	Ko	5	0,4	3757oi	70	1774	31.5	- 1 41	9.0	9.0	A	1	..	12772b
21	1615	31.3	+12 18	7.9	8.2	Fo	4	0,4	3757oi	71	1971	31.5	- 3 6	9.1	9.1	Ao	1	..	12772b
22	1631	31.3	+11 35	8.7	9.7	K	1	..	3758ii	72	1972	31.5	- 3 43	8.7	8.7	Ao	6	..	20802b
23	1715	31.3	+ 9 30	8.3	9.3	K	1	..	3758ii	73	2129	31.5	-10 3	8.31	8.19	B5	4	..	12673b
24	1721	31.3	+ 5 29	8.8	8.8	Ao	4	..	12755b	74	..	31.5	-15 57	..	..	B9	1	..	24594b
25	1735	31.3	+ 3 6	7.9	7.9	Ao	6	..	3758oi	75	1925	31.5	-18 38	7.9	8.2	Fo	8	5,2	18288b
26	1715	31.3	+ 2 18	var.	var.	Na	..	R	M	76	1960	31.5	-19 10	9.1	8.7	Ao	4	..	18288b
27	2191	31.3	- 6 8	8.5	8.6	A2	3	..	20802b	77	2027	31.5	-21 47	9.6	9.2	Ao	3	..	44433b
28	1920	31.3	-15 17	9.8	9.8	Ao	2	..	24594b	78	5747	31.5	-23 20	10.0	8.7	B9	5	..	18301b
29	1921	31.3	-15 46	10.1	10.1	B9	2	..	24594b	79	4752	31.5	-25 7	8.85	8.6	B8	6	..	44433b
30	2051	31.3	-20 19	9.0	8.7	Ao	4	..	18301b	80	4276	31.5	-27 5	8.0	7.7	Ao	5	..	20856b
31	2026	31.3	-21 16	8.7	8.4	B9	6	..	18301b	81	3727	31.5	-34 48	10.1	9.9	Ao	3	..	20670b
32	1945	31.3	-22 37	9.1	8.7	B8	5	..	18301b	82	3724	31.5	-36 53	8.6	8.2	A5	6	..	42915b
33	5739	31.3	-23 21	10.4	9.0	Ao	3	..	18301b	83	2917	31.5	-49 54	10.9	10.0	Ao	2	..	24589b
34	4748	31.3	-25 10	8.25	8.4	A3	5	..	18301b	84	2839	31.5	-50 34	9.2	10.0	Ko	2	..	24589b
35	4272	31.3	-27 15	9.3	9.9	G5	3	..	44428b	85	2840	31.5	-50 38	9.6	9.7	G	3	..	24589b
36	4270	31.3	-27 53	9.3	8.7	Ao	3	..	20856b	86	1361	31.5	-54 1	9.9	10.3	F5	2	..	24589b
37	4761	31.3	-31 17	9.0	8.8	Ko	3	..	42915b	87	1311	31.5	-54 38	9.2	10.0	G5	2	..	24589b
38	3339	31.3	-42 37	9.4	9.0	B5	4	..	20671b	88	449	31.5	-75 22	9.9	10.7	G5	2	..	20652b
39	3246	31.3	-46 32	7.9	9.0	Ko	2	..	20786b	89	1426	31.6	+27 58	8.2	8.2	Ao	5	..	37569i
40	1308	31.3	-54 32	9.1	9.1	B9	7	..	24589b	90	1716	31.6	+ 2 42	9.2	9.3	A2	3	..	12755b
41	773	31.3	-65 44	9.9	9.9	Ao	2	..	15223b	91	1718	31.6	+ 2 32	8.5	9.5	Ko	2	..	3758oi
42	452	31.3	-73 10	10.7	10.7	Ao	3	..	15168b	92	2201	31.6	- 3 0	9.1	9.1	Ao	2	..	12772b
43	292	31.4	+76 19	8.0	9.0	Ko	4	..	37559i	93	2194	31.6	- 6 6	9.4	9.5	A2	3	..	44418b
44	1099	31.4	+59 46	7.10	7.16	A2	6	0,8	37676i	94	2067	31.6	- 7 22	9.2	9.5	Fo	2	..	44418b
45	1232	31.4	+52 47	7.58	8.58	Ko	3	0,2	37515i	95	2124	31.6	-10 31	9.4	9.5	A5	2	..	44418b
46	1742	31.4	+42 41	7.98	8.48	F8	5	..	37463i	96	2017	31.6	-11 34	9.1	9.2	A2	3	2,2	44418b
47	1798	31.4	+38 28	7.6	9.0	Mb	3	0,3	37448i	97	2113	31.6	-13 20	9.1	9.1	Ao	3	..	24594b
48	1623	31.4	+17 7	7.7	..	Oe5	8	..	3757oi	98	2002	31.6	-14 11	8.6	9.7	K2	3	..	12673b
49	1611	31.4	+15 7	8.7	8.7	Ao	4	..	3757oi	99	2001	31.6	-14 29	8.5	9.5	Ko	2	..	12673b
50	1632	31.4	+11 7	9.2	9.2	A	2	..	3758ii	100	2037	31.6	-16 40	7.8	8.8	Ko	7	..	18288b



## THE HENRY DRAPER CATALOGUE.

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7<sup>h</sup> 31<sup>m</sup>.6

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	2056	31.6	-17 36	9.4	10.6	K5	2	..	24594b	51	2030	31.8	-21 56	6.47	7.7	G5	9	5,2	18301b
2	2057	31.6	-17 42	9.1	10.2	K2	3	..	18288b	52	5759	31.8	-23 22	11.6	11.2	Nb	1	..	44433b
3	5753	31.6	-23 17	9.3	9.0	G5	2	..	44381b	53	5761	31.8	-23 35	11.2	9.0	Ao	3	..	18301b
4	5641	31.6	-24 40	9.3	8.7	B9	4	..	18301b	54	4760	31.8	-25 17	8.9	8.6	B8	5	..	18301b
5	4619	31.6	-29 10	10.2	8.8	A	2	..	20856b	55	4581	31.8	-28 42	9.3	9.2	K5	1	..	20856b
6	3546	31.6	-44 28	6.9	8.7	K2	6	..	20786b	56	4623	31.8	-29 51	8.7	8.2	B9	6	..	42915b
7	2841	31.6	-50 37	7.5	9.1	Ma	5	..	24589b	57	3477	31.8	-38 50	8.3	8.4	Ao	6	..	18435b
8	2565	31.6	-51 30	10.2	9.4	B8	4	..	24589b	58	608	31.8	-72 44	9.6	10.0	F5	3	..	15168b
9	1220	31.6	-52 29	9.1	9.4	Fo	5	..	24589b	59	1092	31.9	+57 29	7.92	7.92	Ao	7	1,7	37526i
10	1362	31.6	-53 56	9.5	10.3	G5	2	..	24589b	60	1744	31.9	+42 42	7.86	8.28	F5	7	R	37463i
11	501	31.7	+67 47	8.0	8.6	Go	6	..	37713i	61	1745	31.9	+42 40	7.52	7.94	F5	1	..	37448i
12	1452	31.7	+50 44	6.84	7.26	F5	..	0,6	56,84	62	1593	31.9	+32 14	9.0	9.0	A	1	..	38172i
13	1645	31.7	+33 56	8.6	9.2	Go	3	..	37569i	63	1725	31.9	+24 3	8.2	9.0	G5	1	..	44418b
14	1735	31.7	+22 34	6.94	7.72	G5	4	..	37472i	64	2018	31.9	-4 19	9.2	10.4	K5	1	..	44418b
15	1784	31.7	+19 8	6.80	7.08	Fo	6	0,8	37472i	65	2017	31.9	-4 38	9.1	10.1	Ko	2	..	12673b
16	1717	31.7	+9 53	9.02	9.10	A3	2	..	37581i	66	2126	31.9	-10 25	8.0	8.4	F5	3	R	24594b
17	1974	31.7	-3 57	9.1	9.1	Ao	4	..	44418b	67	..	31.9	-10 25	..	..	A2	1	..	18983b
18	2016	31.7	-4 7	9.2	9.3	A2	4	..	44418b	68	2017	31.9	-14 14	10.1	11.1	Ko	7	..	24594b
19	1995	31.7	-8 13	9.1	9.2	A2	3	..	20802b	69	2016	31.9	-14 23	7.7	7.7	B9	4	..	24594b
20	2040	31.7	-16 41	10.3	10.3	Ao	1	..	18288b	70	1928	31.9	-15 52	9.4	9.5	A2	3	..	24594b
21	2029	31.7	-22 4	8.0	7.7	Ao	3	0,9	8911b	71	..	31.9	-16 47	..	..	A2	3	..	18288b
22	5756	31.7	-23 19	7.5	8.1	Ko	7	0,4	18301b	72	2059	31.9	-17 14	9.2	9.2	Ao	5	..	18301b
23	5755	31.7	-23 28	11.4	9.8	Ko	1	..	44433b	73	2032	31.9	-21 42	7.9	8.9	G5	5	..	18301b
24	5638	31.7	-24 14	10.0	9.2	G5	2	..	18301b	74	4763	31.9	-25 14	9.5	8.3	Ao	5	..	20856b
25	4574	31.7	-28 18	10.2	8.7	Ao	2	..	20856b	75	4286	31.9	-27 42	9.7	8.9	Ao	2	..	42909b
26	4577	31.7	-28 54	9.3	8.9	F8	2	..	44428b	76	4191	31.9	-32 21	9.9	9.2	A2	2	..	20670b
27	4186	31.7	-33 1	8.9	8.8	Ao	3	..	42915b	77	3699	31.9	-37 12	8.3	8.8	Ko	6	..	18435b
28	3473	31.7	-38 39	8.9	9.8	Ko	2	..	18435b	78	3480	31.9	-38 42	9.7	9.0	B9	4	..	20671b
29	3549	31.7	-44 4	6.88	7.0	Ao	8	..	20785b	79	3254	31.9	-40 37	9.0	9.0	Ao	4	..	24589b
30	1221	31.7	-53 3	8.1	8.2	B8	9	..	24589b	80	2570	31.9	-51 45	10.9	10.0	Ao	2	..	15223b
31	935	31.7	-58 59	7.2	9.0	K5	3	..	15516b	81	773	31.9	-67 11	8.9	9.9	Ko	3	..	37526i
32	751	31.7	-63 6	8.7	9.0	Fo	5	..	18486b	82	1100	32.0	+59 19	8.0	9.0	Ko	3	..	37526i
33	1293	31.8	+46 15	8.7	8.8	A5	4	..	37463i	83	1168	32.0	+54 41	8.0	8.5	F8	2	..	37463i
34	1466	31.8	+45 9	9.0	9.3	F2	2	..	37463i	84	1653	32.0	+44 8	8.6	9.7	K2	2	..	37463i
35	1560	31.8	+33 24	6.91	7.69	G5	5	..	37569i	85	1802	32.0	+38 34	8.2	8.3	A2	4	E	56,84
36	1592	31.8	+32 40	7.60	8.38	G5	5	..	37569i	86	1662	32.0	+35 17	5.61	6.39	G5	..	0,9	37569i
37	1711	31.8	+14 12	8.5	8.9	F5	3	..	37570i	87	1646	32.0	+33 56	7.9	8.2	Fo	5	..	37569i
38	1579	31.8	+10 32	8.3	9.1	G5	2	..	37581i	88	1634	32.0	+30 55	8.4	9.2	G5	2	..	37580i
39	2134	31.8	-9 58	9.01	10.19	K5	1	..	44418b	89	1726	32.0	+5 37	7.7	8.8	K2	2	..	44418b
40	2012	31.8	-14 17	9.1	9.1	A	3	..	24594b	90	2072	32.0	-7 17	9.4	9.5	A2	2	..	20802b
41	2010	31.8	-14 22	9.8	9.8	Ao	2	..	24594b	91	2135	32.0	-9 24	8.7	9.9	K5	1	..	44418b
42	2014	31.8	-14 23	9.8	9.8	Ao	2	..	24594b	92	2137	32.0	-9 57	9.6	9.6	Ao	2	..	24594b
43	2013	31.8	-14 31	9.1	9.1	Ao	2	..	12673b	93	2050	32.0	-12 50	9.1	8.9	B3	3	..	24594b
44	1926	31.8	-16 3	8.3	9.7	Ma	2	..	18288b	94	2120	32.0	-13 50	9.1	10.1	Ko	3	..	12673b
45	2041	31.8	-16 58	8.5	8.5	B9	5	..	18288b	95	2119	32.0	-14 2	9.1	9.1	B9	3	..	24594b
46	2058	31.8	-17 36	8.5	8.8	F2	6	..	18288b	96	2019	32.0	-14 12	9.2	9.2	A	2	..	24594b
47	1962	31.8	-19 18	10.1	10.3	K2	2	..	24594b	97	2020	32.0	-14 16	7.9	7.9	B9	4	1,8R	38671i
48	1963	31.8	-19 22	9.6	9.8	Ko	1	..	18288b	98	2021	32.0	-14 16	7.9	7.9	Ao	2	..	12673b
49	1961	31.8	-20 4	8.88	10.1	K5	2	..	18288b	99	2018	32.0	-14 27	9.1	9.1	A2	2	..	24594b
50	2058	31.8	-21 1	8.9	9.6	F5	2	..	18301b	100	2043	32.0	-16 38	10.1	10.2	A2	2	..	24594b



## ANNALS OF HARVARD COLLEGE OBSERVATORY.

61000

7<sup>h</sup> 32<sup>m</sup>.0

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	2042	32.0	-16 45	10.1	10.1	Ao	2	..	18288b	51	4195	32.2	-32 36	8.9	9.1	G5	2	..	42909b
2	..	32.0	-17 30	..	..	Ao	3	..	24594b	52	3484	32.2	-38 12	9.2	9.3	K2	2	..	18435b
3	5770	32.0	-23 41	9.5	8.7	Fo	4	..	18301b	53	2851	32.2	-50 40	11.5	10.2	A3	2	..	24589b
4	4625	32.0	-29 8	8.9	8.5	A2	4	..	42915b	54	2855	32.2	-51 1	10.9	10.0	Ao	2	..	24589b
5	4778	32.0	-31 59	8.3	8.8	Go	5	..	42915b	55	1224	32.2	-52 35	8.5	9.5	K5	5	..	24589b
6	3953	32.0	-33 10	7.12	7.1	B2	4	..	11110b	56	1365	32.2	-53 51	7.2	7.8	F2	9	..	24589b
7	3711	32.0	-35 35	10.1	10.1	Go	2	..	20670b	57	315	32.2	-78 0	10.7	11.0	F	1	..	20652b
8	3710	32.0	-35 57	7.5	8.1	B8	8	..	42915b	58	1467	32.3	+45 3	8.92	9.48	Go	2	..	37463i
9	3481	32.0	-38 38	8.6	9.6	Ko	3	..	18435b	59	1648	32.3	+34 17	8.6	9.7	K2	1	..	37569i
10	293	32.1	+76 2	8.27	8.27	Ao	5	..	37559i	60	1430	32.3	+27 1	8.8	9.8	Ko	1	..	38172i
11	519	32.1	+66 27	8.1	8.2	A2	5	..	37713i	61	1627	32.3	+17 18	8.3	8.7	F5	3	..	37570i
12	1559	32.1	+48 12	8.4	9.2	G5	2	E	37515i	62	1723	32.3	+9 51	8.72	9.14	F5	2	..	37581i
13	1635	32.1	+31 33	8.1	9.1	Ko	2	..	37569i	63	1735	32.3	+6 43	9.0	9.8	G5	2	..	12755b
14	2128	32.1	-10 9	9.6	9.6	B8	2	..	44418b	64	1979	32.3	-3 53	5.17	5.59	F5	..	3,9	56,84
15	2127	32.1	-10 13	9.4	9.8	F5	2	..	44418b	65	2130	32.3	-10 33	9.0	10.1	K2	1	..	44418b
16	2052	32.1	-12 38	8.4	8.4	B9	4	..	12673b	66	2022	32.3	-11 10	9.1	9.6	F8	3	..	44418b
17	2025	32.1	-14 14	7.9	7.9	B9	7	1,3	18983b	67	2060	32.3	-17 57	10.7	10.7	Ao	1	..	24594b
18	1930	32.1	-15 48	9.1	10.1	Ko	4	..	24594b	68	1967	32.3	-19 29	5.66	5.49	B3	..	0,6-	56,84
19	1929	32.1	-15 51	10.1	11.3	K5	2	..	24594b	69	1952	32.3	-22 14	10.2	9.2	A2	3	..	18301b
20	1926	32.1	-18 35	9.1	9.2	A3	4	..	18288b	70	1953	32.3	-23 5	9.2	9.3	G5	3	..	18301b
21	1964	32.1	-19 38	8.7	8.7	Ao	4	..	18301b	71	4775	32.3	-25 6	6.80	6.9	B5	5	3,2 R	8911b
22	1965	32.1	-20 0	9.6	9.8	B5	1	..	18288b	72	4634	32.3	-29 15	8.5	9.4	K5	1	..	44428b
23	1949	32.1	-22 21	9.8	9.3	Go	2	..	44433b	73	3739	32.3	-34 12	9.9	9.0	B8	3	..	42915b
24	5773	32.1	-23 37	8.5	9.8	Ko	5	..	18301b	74	3741	32.3	-35 2	10.3	9.9	Ao	2	..	20670b
25	5649	32.1	-24 23	8.1	7.8	B8	7	..	18301b	75	3734	32.3	-36 51	8.3	9.0	Ko	5	..	42915b
26	4291	32.1	-27 17	7.29	8.4	K2	4	..	20856b	76	3181	32.3	-41 15	8.9	9.0	B8	4	..	20671b
27	3732	32.1	-36 36	8.9	9.0	Ao	4	..	42915b	77	3263	32.3	-46 21	7.5	7.9	Ao	8	..	20786b
28	3706	32.1	-37 25	9.5	9.4	F5	3	..	18435b	78	2853	32.3	-50 35	10.0	9.7	F8	4	..	24589b
29	3423	32.1	-39 11	7.9	8.4	Ao	7	..	18435b	79	1692	32.4	+18 4	9.0	10.1	K2	1	..	37570i
30	3180	32.1	-41 44	9.2	8.7	B9	5	..	20671b	80	1768	32.4	-0 46	8.7	9.1	F5	3	..	37580i
31	2571	32.1	-51 15	6.31	6.2	Ao	5	..	8951b	81	1932	32.4	-15 14	9.25	9.31	A2	4	..	24594b
32	2572	32.1	-51 25	9.6	10.3	K5	1	..	24589b	82	1933	32.4	-15 50	10.5	10.9	F5	2	..	24594b
33	1223	32.1	-52 45	8.0	8.5	Go	8	..	24589b	83	1928	32.4	-18 44	8.7	9.7	Ko	5	..	18288b
34	1427	32.2	+28 32	9.4	9.8	F5	2	..	37569i	84	4299	32.4	-27 21	9.5	8.9	Fo	3	..	20856b
35	1727	32.2	+24 36	6.32	6.60	Fo	7	..	38172i	85	4787	32.4	-30 25	9.0	9.4	Ko	1	..	42915b
36	1613	32.2	+15 17	9.0	9.8	G5	2	..	37570i	86	3735	32.4	-36 29	9.3	9.0	F5	4	..	42915b
37	1712	32.2	+14 34	6.67	6.65	B9	9	..	37570i	87	3709	32.4	-37 13	7.09	7.4	B9	6	..	42928b
38	1713	32.2	+14 17	6.66	6.64	B9	8	..	37570i	88	1225	32.4	-52 55	9.1	9.4	Fo	3	..	24589b
39	1766	32.2	-0 59	8.1	8.9	G5	3	..	37580i	89	1367	32.4	-53 42	8.5	9.5	K5	2	..	24589b
40	2184	32.2	-5 36	9.4	9.4	Ao	3	..	44418b	90	1368	32.4	-53 43	8.6	9.1	F5	5	..	24589b
41	1997	32.2	-8 32	9.0	9.8	G5	3	..	20802b	91	471	32.5	+69 55	8.29	9.29	Ko	4	0,2	37713i
42	2129	32.2	-10 26	9.4	10.0	Go	1	..	44418b	92	1468	32.5	+45 54	8.4	9.0	Go	3	..	37463i
43	2020	32.2	-11 20	9.1	9.2	A3	3	..	44418b	93	1720	32.5	+2 9	6.78	6.76	B9	8	..	37580i
44	2124	32.2	-13 47	9.1	9.1	B9	3	..	12673b	94	1780	32.5	-1 7	8.3	9.4	K2	2	..	37580i
45	2029	32.2	-14 21	8.6	8.6	Ao	4	..	18983b	95	1779	32.5	-1 49	7.7	8.9	K5p	3	0,3 R	12772b
46	2027	32.2	-14 46	9.6	10.0	F5	2	..	24594b	96	2025	32.5	-11 15	9.1	9.6	F8	2	..	44418b
47	1931	32.2	-15 42	9.2	9.5	Fo	4	..	24594b	97	2129	32.5	-13 12	10.3	10.3	Ao	2	..	24594b
48	1951	32.2	-22 59	10.1	9.3	A	3	..	18301b	98	2127	32.5	-13 39	9.1	9.1	Ao	3	..	12673b
49	4592	32.2	-28 11	10.2	8.6	B9	3	..	20856b	99	1935	32.5	-16 2	10.5	11.6	K2	1	..	24594b
50	4591	32.2	-29 1	8.1	8.7	K2	3	..	42915b	100	2061	32.5	-17 17	10.5	10.6	A2	2	..	24594b

## THE HENRY DRAPER CATALOGUE.

61100

7<sup>h</sup> 32<sup>m</sup>.5

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1929	32.5	-18 34	9.2	9.7	F8	2	..	18288b	51	2207	32.8	- 2 22	7.7	7.8	A5	3	0,3	18560b
2	4303	32.5	-27 7	10.9	9.5	Ao	2	..	44428b	52	2187	32.8	- 5 59	8.7	8.8	A2	2	..	20802b
3	3960	32.5	-33 31	8.7	9.2	Ko	2	..	42915b	53	2143	32.8	- 9 36	7.81	8.81	Ko	4	..	20802b
4	3739	32.5	-36 25	10.1	9.9	A5	3	..	18435b	54	1939	32.8	-15 50	9.1	10.3	K5	1	..	24594b
5	1379	32.5	-56 7	10.0	10.0	Ao	2	..	24589b	55	1930	32.8	-18 11	9.4	10.4	Ko	2	..	24594b
6	1093	32.6	+57 18	6.20	7.20	Ko	8	0,8	37526i	56	1974	32.8	-19 46	9.0	9.8	Ko	2	..	18288b
7	1911	32.6	+40 53	7.38	8.16	G5	6	..	37463i	57	2067	32.8	-20 21	9.1	9.6	A2	4	..	18288b
8	1749	32.6	+37 43	9.5	9.5	A	2	..	37448i	58	R	32.8	-22 22	10.7	9.8	A2	1	..	44433b
9	1659	32.6	+36 4	8.8	9.8	Ko	1	..	37448i	59	5784	32.8	-23 47	9.2	9.0	G5	4	..	18301b
10	1649	32.6	+34 49	4.92	5.20	Fo	..	R	56,84	60	5667	32.8	-24 4	7.4	7.8	A2	7	..	18301b
11	1694	32.6	+18 30	9.2	9.8	G	2	..	37570i	61	R	32.8	-24 47	9.6	9.7	A2	1	..	44433b
12	1763	32.6	+ 4 46	9.05	10.05	Ko	1	..	12755b	62	4652	32.8	-26 21	10.0	9.2	Ao	3	..	44428b
13	2079	32.6	- 7 10	9.6	9.6	Ao	1	..	44418b	63	4306	32.8	-27 32	9.7	9.5	Ko	1	..	44428b
14	2039	32.6	-14 6	8.6	9.8	K5	1	..	12673b	64	4648	32.8	-29 8	10.0	9.2	G5	2	..	44428b
15	1934	32.6	-15 6	9.8	9.9	A2	2	..	24594b	65	3569	32.8	-44 24	9.8	9.3	Ao	2	..	20786b
16	1972	32.6	-19 41	10.2	9.8	Ao	1	..	18288b	66	3301	32.8	-45 17	9.4	9.6	F2	1	..	20786b
17	1971	32.6	-20 2	9.6	9.8	F5	1	..	18288b	67	3056	32.8	-48 7	9.8	9.4	F8	1	..	20786b
18	2063	32.6	-20 42	8.9	8.6	B8	4	..	18301b	68	2927	32.8	-49 36	7.8	9.2	Ko	6	..	24589b
19	2064	32.6	-21 2	9.6	10.1	F5	2	..	44433b	69	1316	32.8	-54 52	8.6	8.8	B8	7	..	24589b
20	5780	32.6	-23 53	9.2	7.8	B5	6	..	18301b	70	456	32.8	-76 36	10.1	10.7	Go	1	..	20652b
21	2577	32.6	-51 47	10.9	10.3	Ao	2	..	24589b	71	266	32.8	-78 28	9.3	9.4	A2	6	..	20652b
22	849	32.6	-60 1	7.98	8.4	F5	5	..	18486b	72	987	32.9	+61 19	8.7	9.7	Ko	1	..	37676i
23	316	32.6	-77 19	9.4	10.0	Go	4	..	20652b	73	1718	32.9	+43 33	9.2	9.7	F8	1	..	37463i
24	1983	32.7	+39 2	8.7	9.3	Go	2	E	37463i	74	2208	32.9	- 3 3	8.4	8.5	A3	3	..	12772b
25	1695	32.7	+18 17	8.7	8.8	A2	3	..	37570i	75	2083	32.9	- 7 14	8.7	9.8	K2	3	..	44418b
26	1616	32.7	+15 17	9.0	9.8	G5	1	..	37570i	76	2082	32.9	- 7 30	7.11	7.19	A3	7	0,7	38629i
27	1731	32.7	+ 5 49	8.2	8.8	Go	6	..	12755b	77	2002	32.9	- 8 12	8.9	8.9	B8	4	..	20802b
28	1983	32.7	- 3 20	9.2	9.3	A3	2	..	12772b	78	2003	32.9	- 8 28	8.9	9.0	A2	4	..	20802b
29	2001	32.7	- 9 2	8.9	9.0	A2	2	..	20802b	79	2058	32.9	-13 5	9.0	10.0	Ko	2	..	24594b
30	2140	32.7	-10 3	9.6	9.6	Ao	2	..	44418b	80	1938	32.9	-15 19	9.8	9.8	B9	3	..	24594b
31	2132	32.7	-10 20	10.2	10.2	B9	2	..	44418b	81	1940	32.9	-15 51	8.6	8.7	A3	5	..	18288b
32	2131	32.7	-10 56	9.4	9.4	Ao	2	..	44418b	82	2050	32.9	-16 15	9.4	10.0	Go	4	..	24594b
33	1937	32.7	-15 15	9.8	9.8	Ao	3	..	24594b	83	1932	32.9	-18 14	8.6	9.8	K5	3	..	18288b
34	2065	32.7	-20 50	8.6	8.1	B9	5	..	18301b	84	1931	32.9	-18 36	9.2	10.2	Ko	1	..	18288b
35	2039	32.7	-21 10	6.72	8.1	G5	7	5,4	18301b	85	1976	32.9	-19 9	9.6	9.6	G5	4	0,2	24594b
36	4304	32.7	-27 3	8.7	9.2	Ko	3	..	44428b	86	..	32.9	-19 19	..	..	Ao	2	..	24594b
37	4644	32.7	-29 33	8.7	8.5	Ao	5	..	42915b	87	1975	32.9	-20 5	8.33	8.7	G5	4	..	18301b
38	4801	32.7	-31 5	7.4	9.1	Ma	3	..	42915b	88	2041	32.9	-21 25	9.1	9.8	Ko	1	..	18288b
39	3719	32.7	-35 21	8.3	9.6	Ko	3	..	42915b	89	4787	32.9	-25 38	9.5	8.4	Ao	3	..	20856b
40	1229	32.7	-52 30	8.6	9.2	G5	6	..	24589b	90	4788	32.9	-25 41	10.0	9.0	Ao	1	..	20856b
41	1315	32.7	-54 4	9.6	10.0	F5	3	..	24589b	91	4655	32.9	-26 35	6.83	8.3	Ko	6	..	20856b
42	1273	32.7	-55 33	7.6	8.9	G5	4	..	24589b	92	3264	32.9	-40 18	7.50	8.1	A2	4	..	42928b
43	1380	32.7	-56 32	9.2	9.5	Fo	3	..	24589b	93	3191	32.9	-41 51	8.6	8.1	B3	5	..	20785b
44	436	32.8	+69 34	7.29	8.29	Ko	5	5,7	37559i	94	3271	32.9	-46 56	7.2	8.2	K2	5	..	20786b
45	491	32.8	+68 22	8.8	9.8	Ko	3	..	37713i	95	2579	32.9	-51 45	10.2	9.5	Ao	4	..	24589b
46	1230	32.8	+56 43	8.7	8.8	A5	2	E	37526i	96	940	32.9	-58 26	8.5	9.6	G5	2	..	12757b
47	1750	32.8	+37 12	9.5	9.5	A	2	..	37448i	97	588	32.9	-71 47	9.2	9.3	A5	4	..	15168b
48	1561	32.8	+33 3	9.5	9.6	A2	2	..	37569i	98	1863	33.0	+20 37	8.8	8.8	A	3	..	37570i
49	1634	32.8	+11 21	8.3	8.3	Ao	3	E	37570i	99	1734	33.0	+ 5 9	8.1	8.2	A3	3	..	37580i
50	1724	32.8	+ 9 44	8.8	9.1	Fo	2	..	37581i	100	1987	33.0	- 3 14	8.1	9.3	K5	1	..	12772b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

61200

7<sup>h</sup> 33<sup>m</sup>.0

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	2210	33.0	m. ° ' 6 23	9.1	9.2	A2	1	..	20802b	51	585	33.3	m. ° ' +65 14	8.2	8.6	F5	4	..	37713i
2	2207	33.0	° ' 6 44	6.72	6.70	B9	..	0,5-	56,84	52	1699	33.3	+41 24	6.73	6.73	Ao	10	..	37463i
3	..	33.0	° ' 8 20	..	..	F8	2	3,1	44418b	53	1532	33.3	+16 24	9.4	9.4	A	2	..	37570i
4	2005	33.0	° ' 9 0	8.6	8.6	Ao	4	..	20802b	54	1829	33.3	+ 8 22	9.2	9.8	G	2	..	37581i
5	2062	33.0	° ' 12 32	9.2	9.2	Ao	3	..	24594b	55	2027	33.3	- 4 46	8.3	8.3	Ao	5	..	20802b
6	2060	33.0	° ' 12 44	9.1	9.1	Ao	2	..	24594b	56	2212	33.3	- 6 30	9.2	9.2	Ao	1	..	20802b
7	1941	33.0	° ' 15 28	7.9	7.8	B5	4	..	18983b	57	1946	33.3	-15 43	10.1	10.1	B9	3	..	24594b
8	2072	33.0	° ' 20 23	9.1	10.3	K5	1	..	18288b	58	2063	33.3	-17 12	8.9	8.9	B9	4	..	18288b
9	4310	33.0	° ' 27 12	7.00	7.1	B8	8	..	20856b	59	1934	33.3	-18 7	10.1	10.1	A	2	..	24594b
10	4607	33.0	° ' 28 55	9.0	8.7	Ao	2	..	20856b	60	2042	33.3	-21 31	10.1	9.8	A	1	..	18288b
11	4809	33.0	° ' 31 7	9.5	8.8	Ao	4	..	42915b	61	5685	33.3	-24 21	9.5	9.5	K2	1	..	44433b
12	3724	33.0	° ' 35 31	9.3	9.0	Ao	4	..	42915b	62	4212	33.3	-32 12	8.9	8.6	Ao	3	..	42909b
13	2580	33.0	° ' 51 33	9.2	9.1	Fo	7	..	24589b	63	3750	33.3	-34 4	9.9	9.9	Go	3	..	20670b
14	1230	33.0	° ' 52 13	8.9	9.7	Ko	4	..	24589b	64	1372	33.3	-53 54	8.4	8.8	Ao	7	..	24589b
15	1370	33.0	° ' 53 30	9.9	10.0	A5	2	..	24589b	65	1319	33.3	-54 3	9.0	10.0	Ko	3	..	24589b
16	1276	33.0	° ' 55 36	8.2	9.4	K5	2	..	24589b	66	1279	33.3	-55 54	8.9	9.4	Ko	3	..	24589b
17	1270	33.0	° ' 57 20	8.7	9.1	Ao	3	..	12757b	67	860	33.3	-60 51	7.9	8.1	Ao	5	..	18486b
18	1562	33.1	+33 11	9.4	9.5	A2	3	..	37569i	68	446	33.3	-74 42	9.0	10.0	Ko	5	..	20652b
19	1730	33.1	+24 28	6.04	6.04	Ao	8	..	38172i	69	450	33.3	-75 41	9.6	9.9	Fo	4	..	20652b
20	2189	33.1	+ 5 29	9.2	10.6	Mb	1	..	44419b	70	1235	33.4	+52 43	8.7	9.8	K2	2	2,1	37515i
21	2086	33.1	+ 7 44	8.5	9.7	K5	1	..	20802b	71	1470	33.4	+45 47	8.8	10.0	K5	1	..	37463i
22	2006	33.1	+ 8 29	9.2	10.0	G5	1	..	20802b	72	1866	33.4	+20 22	7.45	7.73	Fo	5	5,7	37570i
23	2135	33.1	+13 12	7.8	8.9	K2	2	..	12673b	73	1831	33.4	+ 8 12	7.22	7.20	B9	7	..	37581i
24	2053	33.1	+14 13	6.42	6.40	B9	8	1,4	18983b	74	1770	33.4	+ 4 52	8.71	9.21	F8	4	..	12755b
25	2052	33.1	+16 12	8.3	9.4	K2	3	..	18288b	75	2026	33.4	+ 0 44	6.90	6.88	B9	8	..	37580i
26	2062	33.1	+17 48	9.6	9.6	B9	2	..	18288b	76	2146	33.4	- 9 24	9.6	9.7	A5	2	..	44418b
27	5791	33.1	+23 33	6.30	7.2	Fo	9	..	18301b	77	2137	33.4	-10 24	7.31	8.49	K5	4	E	20802b
28	4609	33.1	+28 5	8.7	9.5	K2	1	..	44428b	78	2057	33.4	-14 32	9.4	9.4	Ao	2	..	12673b
29	3749	33.1	+34 52	9.9	10.4	Ko	1	..	20670b	79	..	33.4	-14 42	..	..	A2	2	..	24594b
30	2863	33.1	+50 29	10.0	9.7	A2	4	..	24589b	80	1945	33.4	-15 19	9.4	9.7	Fo	2	..	24594b
31	1371	33.1	+53 37	9.4	9.4	Ao	4	..	24589b	81	1936	33.4	-18 24	9.6	9.6	Ao	3	..	18288b
32	504	33.2	+67 50	8.9	8.9	Ao	4	..	37713i	82	2043	33.4	-21 13	9.8	9.6	A2	2	..	18288b
33	1746	33.2	+42 18	8.5	8.9	F5	3	..	37463i	83	1956	33.4	-22 24	9.6	9.5	F5	2	..	44433b
34	1769	33.2	+ 4 16	8.7	8.7	B9	3	..	37580i	84	1957	33.4	-22 53	10.1	9.0	B9	3	..	18301b
35	2190	33.2	- 5 27	9.1	9.1	B8	4	..	44418b	85	5688	33.4	-24 55	10.4	9.7	Go	2	..	44433b
36	2088	33.2	- 7 54	6.92	7.70	G5	7	..	20802b	86	4804	33.4	-25 13	10.0	9.2	Ko	1	..	20856b
37	2056	33.2	-14 34	9.4	10.4	Ko	3	..	24594b	87	4817	33.4	-32 2	9.3	9.1	A2	2	..	42909b
38	2054	33.2	-17 4	10.3	10.9	Go	1	..	24594b	88	3500	33.4	-38 58	9.9	9.3	B9	3	..	18435b
39	5792	33.2	-23 10	10.2	9.2	Fo	2	..	18301b	89	3577	33.4	-44 10	10.2	9.0	Ao	3	..	20786b
40	4612	33.2	-28 13	9.5	8.9	Ao	1	..	20856b	90	3277	33.4	-47 1	8.0	7.9	B9	8	..	20786b
41	4814	33.2	-30 3	9.50	9.9	Ko	1	..	44428b	91	1232	33.4	-52 20	9.9	10.0	A5	2	..	24589b
42	3749	33.2	-36 29	9.3	9.0	Ao	3	..	42915b	92	1719	33.5	+43 31	9.2	9.3	A3	2	..	37463i
43	3437	33.2	-39 38	7.9	8.1	A2	2	..	42928b	93	1915	33.5	+40 24	9.1	10.5	Ma	1	..	37463i
44	3354	33.2	-42 44	9.4	9.3	Ao	3	E	20671b	94	1803	33.5	+38 34	5.89	7.07	K5	7	3,8	37448i
45	3573	33.2	-44 44	7.00	7.8	Ko	7	..	20786b	95	1599	33.5	+32 14	6.14	6.42	Fo	9	..	37569i
46	2932	33.2	-49 43	7.8	9.4	K2	6	..	24589b	96	1699	33.5	+18 37	9.0	9.6	G	1	..	37570i
47	2864	33.2	-50 20	8.9	8.8	A5	7	..	24589b	97	1626	33.5	+12 6	7.5	8.7	K5	5	..	37570i
48	1231	33.2	-52 19	4.92	7.1	K5	..	3,5 R	28,200	98	1832	33.5	+ 8 41	8.2	8.6	F5	2	..	37581i
49	..	33.2	-77 45	..	..	F8	1	..	20652b	99	2194	33.5	- 5 34	8.6	9.4	G5	2	..	20802b
50	586	33.3	+65 31	8.2	8.5	Fo	5	..	37713i	100	2008	33.5	- 8 7	8.7	9.7	Ko	2	..	20802b

## THE HENRY DRAPER CATALOGUE.

61300

7<sup>h</sup> 33<sup>m</sup>.5

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	2066	33.5	-13 5	9.1	9.5	F5	2	..	24594b	51	4324	33.7	-27 3	8.1	8.3	Ao	4	..	20856b
2	1948	33.5	-15 42	9.8	9.9	A2	3	..	24594b	52	4628	33.7	-28 58	10.7	9.2	Ao	1	..	44428b
3	2056	33.5	-16 15	10.3	11.1	G5	3	..	24594b	53	4831	33.7	-30 24	9.0	8.5	Ao	6	..	42915b
4	2066	33.5	-18 5	10.3	11.1	G5	1	..	24594b	54	4217	33.7	-32 5	9.3	9.4	Go	3	..	42915b
5	1959	33.5	-22 54	8.6	8.7	Ko	4	..	18301b	55	4219	33.7	-32 10	8.6	8.5	B3	5	..	42915b
6	5690	33.5	-24 56	10.7	9.8	Ko	1	..	44433b	56	3973	33.7	-33 27	9.9	8.6	Ao	3	..	42915b
7	4669	33.5	-26 10	9.3	9.7	K5	1	..	44428b	57	1323	33.7	-54 54	9.1	10.3	K5	1	..	24589b
8	4822	33.5	-30 34	7.7	7.3	B8	8	..	42915b	58	1384	33.7	-56 50	9.4	10.0	G	1	E	24589b
9	3727	33.5	-35 5	8.6	9.4	G5	2	..	42915b	59	1273	33.7	-57 37	9.7	9.7	A	1	..	12757b
10	3501	33.5	-38 36	8.6	8.5	Ao	5	..	18435b	60	852	33.7	-59 19	9.1	9.4	F	2	..	12757b
11	754	33.5	-63 16	9.1	10.1	Ko	1	..	15274b	61	1214	33.8	+55 0	6.89	7.89	Ko	6	..	37526i
12	656	33.5	-68 33	6.72	7.0	Ao	7	0.9	9003b	62	1342	33.8	+51 10	8.6	9.6	Ko	1	E	37344i
13	447	33.5	-74 4	7.7	8.0	Fo	8	..	20652b	63	1561	33.8	+48 22	5.77	6.55	G5	8	5.9	37515i
14	448	33.5	-74 28	7.6	7.7	A3	8	..	20652b	64	1440	33.8	+26 57	8.6	9.4	G5	1	..	38172i
15	317	33.5	-77 37	8.2	9.0	G5	7	..	20652b	65	1727	33.8	+2 25	9.0	9.0	B9	2	..	37580i
16	419	33.6	+70 58	8.4	9.2	G5	2	..	37559i	66	1872	33.8	+1 11	7.7	8.5	G5	3	..	37580i
17	1916	33.6	+40 1	8.47	8.89	F5	3	..	37463i	67	2029	33.8	-0 2	7.28	8.63	Ma	4	..	37580i
18	1744	33.6	+21 56	8.6	9.0	F5	3	..	37494i	68	2144	33.8	-14 2	9.8	9.8	Ao	2	..	24594b
19	1638	33.6	+11 0	8.3	9.1	G5	3	..	37581i	69	2047	33.8	-21 40	9.8	9.3	B9	3	..	18301b
20	1745	33.6	+3 45	7.9	8.9	Ko	4	..	37580i	70	5697	33.8	-24 17	10.4	9.3	Ao	2	..	44433b
21	2147	33.6	-9 36	9.8	10.1	Fo	2	..	44418b	71	4815	33.8	-25 45	9.5	8.6	Ao	2	..	20856b
22	1949	33.6	-15 27	10.3	10.3	Ao	2	..	24594b	72	4679	33.8	-27 0	8.5	8.6	F5	1	..	20856b
23	1950	33.6	-15 49	7.36	8.36	Ko	8	..	18288b	73	3755	33.8	-36 11	7.15	8.4	Ko	7	0.2	42915b
24	2067	33.6	-17 20	10.5	10.5	Ao	1	..	18288b	74	3730	33.8	-37 27	11.0	9.0	Ao	4	..	18435b
25	1981	33.6	-19 22	9.2	8.7	B8	5	..	18288b	75	3506	33.8	-38 49	9.3	8.8	B8	3	..	18435b
26	1980	33.6	-19 34	10.1	9.8	Ao	2	..	18288b	76	3507	33.8	-38 59	8.9	9.0	F5	3	..	18435b
27	4827	33.6	-30 10	10.2	9.2	A2	2	..	44428b	77	3310	33.8	-45 12	7.10	8.5	Ko	6	..	20786b
28		33.6	-33 16		9.1	B8				78	1374	33.8	-53 38	8.9	10.0	K5	2	..	24589b
29	3972	33.6	-33 16	9.3	8.8	B8	4	R	42915b	79	712	33.8	-66 8	9.1	9.9	G5	1	..	15274b
30	3755	33.6	-34 44	4.62	4.57	B8	..	1,7 R	28,200	80	949	33.9	+62 32	8.8	9.9	K2	2	..	37676i
31	3754	33.6	-36 9	9.3	9.6	Ao	2	..	42915b	81	1177	33.9	+53 24	8.2	9.2	Ko	1	E	37409i
32	3444	33.6	-39 58	7.04	8.4	K2	2	..	42928b	82	2031	33.9	-4 34	8.4	8.4	B9	4	..	20802b
33	3579	33.6	-44 45	7.04	7.0	B5	2	..	42162b	83	2196	33.9	-5 14	7.70	8.26	Go	5	..	20802b
34	3581	33.6	-45 3	8.90	9.0	A2	4	..	20786b	84	2034	33.9	-12 2	8.3	8.4	A5	4	..	12673b
35	590	33.6	-71 4	9.4	10.2	G5	3	..	15168b	85	1986	33.9	-19 34	10.1	10.1	Ao	1	..	18288b
36	1340	33.7	+51 42	8.4	8.5	A3	3	1,2	37344i	86	1985	33.9	-19 49	10.1	9.8	B9	2	..	18288b
37	1296	33.7	+46 51	7.91	8.91	Ko	3	..	37463i	87	4819	33.9	-25 47	10.7	9.2	Ao	2	..	44433b
38	1701	33.7	+17 55	5.24	6.42	K5	10	R	37570i	88	4333	33.9	-27 12	10.0	9.8	A2	1	..	20856b
39	1719	33.7	+14 42	9.0	10.0	Ko	1	..	37570i	89	4838	33.9	-30 59	10.2	9.2	G5	3	..	42915b
40	1733	33.7	+9 9	7.40	8.18	G5	5	..	37581i	90	3586	33.9	-44 48	7.84	8.7	G5	4	..	20786b
41	1837	33.7	+8 4	7.80	7.86	A2	5	..	37581i	91	3069	33.9	-48 36	5.86	5.6	B9	..	1,6	56,124
42	1746	33.7	+3 3	9.0	9.6	Go	3	..	12755b	92	1375	33.9	-53 35	8.4	9.1	K5	5	..	24589b
43	1787	33.7	-1 12	7.9	7.9	Ao	5	..	37580i	93	1283	33.9	-55 17	9.0	10.0	Ko	1	..	24589b
44	2028	33.7	-4 46	7.9	8.2	Fo	4	..	20802b	94	1282	33.9	-55 40	6.37	7.4	G5	9	..	24589b
45	2091	33.7	-7 24	9.0	9.1	A2	2	..	20802b	95	1385	33.9	-56 28	8.7	9.4	Fo	4	..	24589b
46	2149	33.7	-9 50	8.7	8.7	Ao	3	..	20802b	96	991	34.0	+61 23	8.0	9.0	Ko	5	5.4	37526i
47	2143	33.7	-13 38	8.3	8.1	B2	2	..	12673b	97	1443	34.0	+27 32	8.6	9.6	Ko	2	..	37569i
48	2059	33.7	-14 34	9.2	9.3	A2	3	..	24594b	98	1537	34.0	+16 16	8.5	9.5	Ko	1	..	37570i
49	2057	33.7	-17 0	9.4	10.6	K5	1	..	24594b	99	1725	34.0	+13 7	8.8	9.4	G	2	..	37570i
50	2068	33.7	-17 7	9.0	9.0	B9	3	..	18288b	100	1797	34.0	+7 30	8.7	8.8	A3	1	..	37581i

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

61400

7<sup>h</sup> 34<sup>m</sup>.0

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	2141	34.0	-10 19	8.3	8.3	B9	4	E	20802b	51	3761	34.2	-34 21	9.9	9.6	A	2	E	20670b
2	2058	34.0	-16 44	10.1	11.5	Ma	1	..	24594b	52	3735	34.2	-37 43	9.5	9.6	G5	3	..	20670b
3	2072	34.0	-17 20	9.6	10.6	Ko	2	..	24594b	53	3736	34.2	-37 47	6.28	7.4	K2	..	3,4	56,124
4	2073	34.0	-17 51	9.8	9.8	Ao	1	..	18288b	54	2874	34.2	-50 21	10.5	9.7	Ao	2	..	24589b
5	2071	34.0	-17 54	9.8	9.9	A2	3	..	18288b	55	1095	34.3	+57 2	8.5	8.5	B9	5	1,3	37526i
6	1941	34.0	-18 16	9.2	9.2	Ao	3	..	18288b	56	1620	34.3	+15 50	9.2	9.2	A	2	..	37570i
7	2051	34.0	-22 1	9.0	8.6	B5	4	..	18301b	57	1619	34.3	+15 34	9.2	9.2	Ao	2	..	37570i
8	4845	34.0	-30 22	9.5	9.2	Ao	2	..	44428b	58	1720	34.3	+14 46	8.74	8.74	Ao	3	..	37570i
9	3760	34.0	-35 3	6.54	8.1	Ko	8	..	42915b	59	1841	34.3	+8 4	7.90	8.90	Ko	2	..	37581i
10	3290	34.0	-46 54	8.8	9.0	Ko	2	..	20786b	60	1798	34.3	+7 41	8.5	8.6	A2	4	2,2	12755b
11	2938	34.0	-49 41	9.2	10.3	K5	1	..	24589b	61	2199	34.3	-5 36	9.8	9.9	A2	3	..	44418b
12	1376	34.0	-53 10	9.5	10.6	K2	1	..	24589b	62	..	34.3	-8 13	..	..	Ao	1	..	44418b
13	1324	34.0	-54 24	9.6	10.0	F5	2	..	24589b	63	2156	34.3	-9 44	8.1	8.1	Ao	4	..	20802b
14	1325	34.0	-54 55	9.5	10.0	F8	2	..	24589b	64	2066	34.3	-14 6	9.1	9.1	Ao	3	1,1	24594b
15	846	34.0	-62 49	9.1	9.2	A2	4	..	18486b	65	2065	34.3	-14 51	8.5	9.6	K2	1	..	12673b
16	492	34.1	+68 41	9.5	10.3	G5	2	..	37713i	66	2055	34.3	-21 39	9.4	9.0	B8	3	..	18301b
17	1657	34.1	+49 17	8.7	9.5	G5	1	E	37344i	67	1961	34.3	-22 12	8.9	9.8	Ko	3	..	18301b
18	1987	34.1	+39 54	8.72	9.72	K	1	..	37463i	68	4341	34.3	-27 39	10.4	9.2	A3	1	..	20856b
19	1805	34.1	+38 4	9.5	9.5	Ao	1	..	37463i	69	4847	34.3	-30 25	9.5	9.1	F8	2	..	44428b
20	1666	34.1	+34 55	8.32	8.66	F2	4	..	37569i	70	4838	34.3	-31 13	7.17	7.6	Fo	9	..	42915b
21	1739	34.1	+5 29	0.48	0.90	F5	..	R	28,200	71	3743	34.3	-35 53	8.6	8.7	Ao	5	..	42915b
22	2030	34.1	+0 20	8.1	8.2	A2	4	..	37580i	72	3364	34.3	-42 39	9.2	9.3	Go	2	E	20671b
23	2153	34.1	-10 2	9.2	9.2	B9	3	..	44418b	73	1379	34.3	-53 29	10.0	10.0	Ao	3	..	24589b
24	2061	34.1	-14 46	9.1	9.1	Ao	2	..	12673b	74	1382	34.3	-53 29	10.0	10.0	Ao	3	..	24589b
25	2060	34.1	-16 29	9.4	10.6	K5	1	..	18288b	75	713	34.3	-66 25	8.8	9.8	Ko	3	..	15274b
26	1942	34.1	-18 36	10.7	10.7	Ao	2	..	24594b	76	522	34.4	+66 41	9.0	9.6	G	1	..	37713i
27	2080	34.1	-20 33	9.6	9.8	A5	2	..	18288b	77	950	34.4	+62 45	8.2	9.2	Ko	4	..	37676i
28	2052	34.1	-21 36	8.5	8.1	B9	7	..	18301b	78	1749	34.4	+42 5	9.2	9.3	A3	1	..	37463i
29	4828	34.1	-25 8	4.64	4.59	B8	..	O, R	56,84	79	1578	34.4	+29 4	9.0	9.4	F5	3	..	37569i
30	4634	34.1	-28 30	8.1	7.8	F5	5	O, 5	20856b	80	1842	34.4	+8 51	8.69	9.47	G5	1	..	37581i
31	4833	34.1	-31 54	6.62	7.3	F5	10	..	42915b	81	1778	34.4	-0 55	9.0	9.0	Ao	2	..	37580i
32	3316	34.1	-45 21	9.0	9.1	Go	3	..	20786b	82	2099	34.4	-8 3	9.6	9.6	Ao	2	..	44418b
33	2940	34.1	-49 24	9.4	10.3	K2	1	..	24589b	83	2037	34.4	-11 36	8.5	8.8	Fo	2	..	12673b
34	2591	34.1	-51 38	9.6	9.4	Ao	4	..	24589b	84	2146	34.4	-13 28	8.1	8.1	B9	4	..	12673b
35	1378	34.1	-53 57	6.8	7.2	Ao	4	..	8951b	85	2067	34.4	-14 8	9.1	9.1	B9	3	..	12673b
36	1277	34.1	-57 4	6.80	8.1	Ko	6	..	12757b	86	2063	34.4	-16 12	8.6	8.6	Ao	6	..	18288b
37	748	34.1	-69 40	9.2	10.4	K5	1	..	15274b	87	2064	34.4	-16 34	10.1	11.2	K2	2	..	24594b
38	587	34.2	+65 39	9.4	9.7	F	2	..	37713i	88	1989	34.4	-19 37	9.2	9.0	Ko	4	..	18288b
39	2198	34.2	-5 27	8.9	8.9	Ao	3	..	20802b	89	1991	34.4	-19 38	9.6	9.8	Ko	1	..	18288b
40	2154	34.2	-9 44	8.7	9.2	F8	3	..	44419b	90	2056	34.4	-21 27	10.1	9.3	Ao	2	..	44433b
41	2063	34.2	-14 18	9.2	10.2	Ko	2	..	24594b	91	5832	34.4	-23 36	10.7	9.3	G5	2	..	18301b
42	2064	34.2	-14 32	9.4	10.8	Ma	1	..	24594b	92	4701	34.4	-26 21	9.2	8.3	B9	4	..	20856b
43	..	34.2	-17 24	..	..	A2	2	..	24594b	93	4853	34.4	-30 32	9.2	9.2	Ko	2	5,2	44428b
44	1943	34.2	-18 51	9.6	10.4	G5	2	..	18288b	94	4850	34.4	-30 35	10.4	9.1	Fo	1	..	44428b
45	5824	34.2	-23 53	10.7	9.6	A5	2	..	44433b	95	611	34.4	-72 22	9.1	9.2	A2	5	..	15168b
46	4691	34.2	-26 40	8.3	7.8	A3	6	..	20856b	96	297	34.5	+77 14	8.0	8.8	G5	4	..	37559i
47	4694	34.2	-26 55	9.0	8.9	G5	2	..	20856b	97	1103	34.5	+58 57	4.96	5.02	A2	..	0,10	56,84
48	4636	34.2	-28 13	9.7	8.6	Ao	3	..	20856b	98	1658	34.5	+44 23	8.9	9.5	Go	1	..	37463i
49	4635	34.2	-28 35	10.7	8.9	B9	2	..	44428b	99	1988	34.5	+39 26	7.72	7.72	Ao	5	..	37463i
50	4691	34.2	-29 42	11.2	9.4	Ao	1	..	44428b	100	1794	34.5	+19 35	7.7	8.1	F5	3	E	37570i

THE HENRY DRAPER CATALOGUE.

61500

7<sup>h</sup> 34<sup>m</sup>.5

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1641	34.5	+11 19	7.5	8.5	Ko	5	..	3757oi	51	2039	34.7	-11 20	7.00	6.95	B8	6	0.4	12673b
2	1741	34.5	+ 5 30	8.7	8.8	A5	3	..	12755b	52	1958	34.7	-15 20	8.9	9.0	A3	2	..	12673b
3	1775	34.5	+ 4 21	8.7	9.1	F5	3	..	12755b	53	1961	34.7	-16 5	7.9	8.9	Ko	3	E	18976b
4	2037	34.5	- 4 54	9.2	9.6	F5	2	..	44418b	54	1946	34.7	-18 27	6.44	6.42	B9	5	1,3	8903b
5	2100	34.5	- 7 23	9.0	9.0	Ao	5	2,3	44418b	55	4707	34.7	-26 34	4.50	4.45	B8	..	R	28,200
6	2015	34.5	- 8 27	8.5	8.5	Ao	4	..	20802b	56	4707	34.7	-26 34	4.62	4.45	B3	..	..	..
7	2157	34.5	- 9 58	8.21	8.21	Ao	5	..	20802b	57	4847	34.7	-31 38	7.5	8.5	Ko	7	..	42915b
8	..	34.5	-16 52	..	..	Ao	2	..	24594b	58	4239	34.7	-32 31	7.9	8.8	Ko	3	..	42915b
9	2075	34.5	-17 22	10.1	10.1	Ao	3	..	24594b	59	4240	34.7	-32 51	9.3	8.6	Ao	3	..	42915b
10	..	34.5	-18 44	..	..	K2	1	..	24594b	60	1383	34.7	-53 51	8.5	8.8	F8	6	..	24589b
11	2057	34.5	-21 40	9.8	9.3	Ao	3	..	18301b	61	733	34.7	-65 1	9.0	10.2	K5	1	..	15274b
12	4703	34.5	-26 5	7.00	7.4	B9	8	0,3	20856b	62	1779	34.8	+23 29	8.2	8.3	A2	2	..	37494i
13	4702	34.5	-29 51	9.5	9.7	Ao	2	..	44428b	63	1742	34.8	+ 5 28	5.81	5.81	Ao	..	2,8	56,84
14	4856	34.5	-30 23	10.2	9.7	Ao	1	..	44428b	64	1733	34.8	+ 2 20	9.0	9.1	A2	2	..	3758oi
15	4854	34.5	-30 53	10.2	8.8	Ao	3	0,2	42915b	65	2072	34.8	-14 59	10.1	10.1	Ao	2	..	24594b
16	3766	34.5	-34 45	8.3	7.8	Ao	8	..	42915b	66	1962	34.8	-15 41	9.4	10.5	K2	1	..	24594b
17	3765	34.5	-36 17	9.9	9.9	K2	1	..	18435b	67	2068	34.8	-16 27	8.9	10.0	K2	3	..	24594b
18	1236	34.5	-52 8	8.2	8.5	F5	8	..	24589b	68	..	34.8	-17 43	..	..	Ao	2	..	24594b
19	1286	34.5	-55 16	9.9	10.0	A2	2	..	24589b	69	2077	34.8	-17 54	9.1	9.2	A3	3	..	18288b
20	452	34.5	-75 18	8.8	9.1	F2	7	..	20652b	70	1965	34.8	-22 30	9.6	9.0	A	3	..	44381b
21	588	34.6	+65 41	8.8	9.8	K	2	..	37713i	71	1963	34.8	-23 3	10.5	9.6	Ao	1	..	44381b
22	1457	34.6	+50 48	8.9	9.2	Fo	2	E	37344i	72	5718	34.8	-24 45	10.4	9.2	A2	4	2,2	44433b
23	1438	34.6	+28 11	8.8	8.8	Ao	3	..	37569i	73	4708	34.8	-29 50	10.0	9.4	B8	2	..	44428b
24	1704	34.6	+18 49	8.5	9.3	G5	1	..	3757oi	74	3414	34.8	-43 25	8.2	8.7	K2	2	..	20786b
25	1736	34.6	+ 9 19	8.2	8.2	Ao	5	..	37581i	75	2949	34.8	-49 21	10.2	10.3	A	1	..	24589b
26	1873	34.6	+ 1 31	8.7	9.2	F8	3	..	3758oi	76	947	34.8	-58 9	7.7	8.7	Fo	4	..	12757b
27	2223	34.6	- 6 45	9.6	9.6	Ao	2	..	44418b	77	1057	34.9	+58 34	8.6	9.8	K5	2	..	37526i
28	2016	34.6	- 8 58	9.8	9.9	A3	2	..	44418b	78	1097	34.9	+57 45	8.6	8.7	A2	3	..	37526i
29	1945	34.6	-18 35	9.8	9.8	B9	3	..	18288b	79	1344	34.9	+51 30	8.8	8.9	A3	2	E	37344i
30	1944	34.6	-18 45	10.1	11.2	K2	2	..	24594b	80	1806	34.9	+38 23	9.0	9.1	A2	1	..	37463i
31	1992	34.6	-19 49	9.2	10.1	K5	1	..	18288b	81	1799	34.9	+ 7 0	8.3	9.7	Ma	2	..	37581i
32	1993	34.6	-20 3	7.23	7.7	A3	3	0,6-	8903b	82	2040	34.9	- 5 4	9.25	9.59	F2	2	..	44418b
33	2084	34.6	-20 29	9.0	9.0	Ao	5	..	18288b	83	2202	34.9	- 6 1	7.7	8.5	G5	5	..	20802b
34	2059	34.6	-21 7	9.1	9.8	K5	1	..	18288b	84	2226	34.9	- 6 45	9.4	9.4	Ao	3	..	44418b
35	1962	34.6	-22 44	10.5	9.8	A3	2	..	44381b	85	2105	34.9	- 8 3	9.8	9.8	Ao	2	..	44418b
36	5845	34.6	-23 57	10.2	9.3	Ao	1	..	44381b	86	2159	34.9	- 9 30	9.2	9.2	Ao	2	..	44419b
37	4344	34.6	-27 55	9.5	8.8	F	2	R	44428b	87	2073	34.9	-15 3	9.11	9.61	F8	2	..	24594b
38	4844	34.6	-31 17	10.7	9.2	Ko	2	..	42915b	88	1963	34.9	-15 15	9.8	9.8	Ao	3	..	24594b
39	4236	34.6	-32 16	8.6	8.6	F8	4	..	42915b	89	2069	34.9	-16 37	6.52	7.59	K2	2	2,9	8903b
40	3455	34.6	-39 15	8.6	9.0	Ko	2	..	18435b	90	2078	34.9	-18 0	9.1	9.1	B9	4	..	18288b
41	2599	34.6	-51 27	9.1	9.7	G5	3	..	24589b	91	2087	34.9	-20 8	9.03	10.1	K5	1	..	18288b
42	1328	34.6	-54 21	9.6	10.0	F5	2	..	24589b	92	R	34.9	-22 36	10.7	9.8	K2	1	..	44381b
43	1327	34.6	-55 2	9.9	10.0	A2	2	..	24589b	93	4868	34.9	-30 14	7.9	8.5	B9	7	..	42915b
44	855	34.6	-59 23	8.2	9.0	F2	2	..	15516b	94	4866	34.9	-30 55	9.3	8.5	B9	6	..	42915b
45	223	34.6	-80 36	8.9	9.7	G5	2	E	22237b	95	4854	34.9	-31 30	7.8	8.5	F5	4	..	42915b
46	1056	34.7	+58 6	9.4	9.7	F	2	..	37526i	96	3220	34.9	-41 55	9.3	9.3	Ao	1	..	20785b
47	1630	34.7	+12 13	8.3	8.3	Ao	4	..	3757oi	97	2601	34.9	-51 11	7.3	9.1	G5	7	..	24589b
48	1746	34.7	+ 5 55	8.8	8.9	A2	3	..	12755b	98	1330	34.9	-54 21	10.2	10.3	A3	1	..	24589b
49	2102	34.7	- 7 58	9.6	9.6	Ao	2	..	44418b	99	1477	35.0	+47 28	8.0	8.0	B9	4	E	37463i
50	2017	34.7	- 8 52	9.4	9.4	Ao	2	..	20802b	100	1756	35.0	+37 40	7.6	7.7	A3	6	2,5 R	37448i

JOHN G. WOLBACH LIBRARY  
HARVARD COLLEGE OBSERVATORY  
CAMBRIDGE, MASS. 02138

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

61600

7<sup>h</sup> 35<sup>m</sup>.0

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1665	35.0	+36 34	9.5	9.5	Ao	2	..	37448i	51	4716	35.2	-26 11	10.0	8.7	Ao	2	..	20856b
2	1738	35.0	+25 12	8.0	8.5	F8	5	0,6	10754i	52	4718	35.2	-26 27	9.5	8.7	A2	3	..	20856b
3	1780	35.0	+23 16	6.18	7.36	K5	6	..	37494i	53	4715	35.2	-29 15	7.7	7.7	B8	7	..	42915b
4	1749	35.0	+22 2	8.4	8.4	Ao	3	..	37494i	54	3088	35.2	-49 2	9.4	9.1	Go	5	..	24589b
5	1793	35.0	-1 39	7.7	7.7	B8	5	0,5	18560b	55	664	35.2	-70 9	8.32	8.6	F2	6	..	15168b
6	2001	35.0	-3 21	7.25	8.32	K2	2	..	18560b	56	454	35.2	-75 7	9.9	10.5	Go	2	..	20652b
7	2042	35.0	-4 34	8.5	9.3	G5	3	..	20802b	57	1105	35.3	+59 31	7.61	7.89	Fo	4	..	37676i
8	2149	35.0	-10 24	9.2	10.0	G5	2	..	44419b	58	1563	35.3	+48 45	8.2	9.3	K2	2	..	37344i
9	2157	35.0	-13 39	8.5	9.7	K5	2	..	12673b	59	1300	35.3	+46 44	8.0	8.1	A5	3	E	37463i
10	2155	35.0	-13 56	9.2	9.2	Ao	4	..	24594b	60	1661	35.3	+21 42	8.2	9.3	K2	3	..	37494i
11	1965	35.0	-15 48	8.1	8.5	F5	3	E	18976b	61	1592	35.3	+10 0	8.97	9.03	A2	3	..	37581i
12	2070	35.0	-16 9	10.3	10.3	B9	3	..	24594b	62	1846	35.3	+8 38	9.15	10.50	Ma	..	..	33772i
13	..	35.0	-16 25	..	..	F5	2	..	24594b	63	1802	35.3	+7 16	8.3	8.9	Go	3	5,2	12755b
14	2079	35.0	-18 4	10.6	10.7	A2	1	..	24594b	64	1750	35.3	+6 52	8.2	9.0	G5	2	..	37581i
15	1947	35.0	-18 33	9.2	10.0	G5	3	..	18288b	65	1736	35.3	+2 47	9.4	10.0	G	2	..	37580i
16	1949	35.0	-18 48	9.6	10.1	F8	1	..	18288b	66	2204	35.3	-5 21	10.1	10.6	F8	1	..	44418b
17	1995	35.0	-19 32	9.2	9.0	Ao	5	..	18288b	67	2205	35.3	-5 51	8.7	9.8	K2	1	..	20802b
18	R	35.0	-22 34	10.2	8.7	Ao	2	..	44381b	68	2019	35.3	-8 39	10.1	10.1	Ao	2	..	44418b
19	4848	35.0	-25 13	8.30	7.8	B9	5	..	20856b	69	2160	35.3	-14 0	9.0	9.0	Ao	3	..	12673b
20	4849	35.0	-25 26	10.2	9.2	Ao	1	..	20856b	70	2083	35.3	-17 41	9.2	9.8	Go	3	..	18288b
21	3520	35.0	-38 29	8.6	8.1	Ao	3	..	42928b	71	5865	35.3	-24 0	8.9	8.9	Ko	4	..	18301b
22	3464	35.0	-39 27	8.1	8.4	B9	6	..	18435b	72	4722	35.3	-26 38	6.23	6.5	B8	..	1,9-	28,200
23	3463	35.0	-39 45	6.53	6.7	Ao	8	..	42928b	73	4662	35.3	-28 27	9.7	8.9	A2	2	..	20856b
24	1385	35.0	-53 50	10.3	10.3	Ao	3	..	24589b	74	4878	35.3	-30 45	9.7	8.9	Ao	3	..	42915b
25	1332	35.0	-54 51	9.6	10.6	Ko	1	..	24589b	75	4862	35.3	-31 53	9.2	8.8	Go	3	..	42909b
26	1389	35.0	-56 42	9.3	9.7	F5	1	E	24589b	76	751	35.3	-69 55	9.18	8.6	Fo	3	..	15274b
27	1282	35.0	-57 49	9.1	9.5	A3	2	..	12757b	77	590	35.4	+65 18	9.5	9.9	F5	1	..	37713i
28	1705	35.1	+41 43	8.1	9.1	Ko	2	..	37463i	78	1471	35.4	+45 11	8.9	9.5	G	1	..	37463i
29	1566	35.1	+33 38	8.5	9.0	F8	3	..	37569i	79	1634	35.4	+17 6	8.3	9.5	K5	1	..	37570i
30	1721	35.1	+13 59	6.50	7.50	Ko	8	..	37570i	80	1739	35.4	+9 22	8.2	8.2	B9	5	..	37581i
31	2107	35.1	-7 18	8.6	9.7	K2	1	..	44419b	81	2021	35.4	-8 52	9.4	9.4	Ao	2	..	44419b
32	2079	35.1	-12 17	8.3	8.9	Go	2	..	12673b	82	2086	35.4	-17 9	10.7	10.7	A	1	..	24594b
33	1950	35.1	-18 46	9.6	9.6	A	3	..	18288b	83	1997	35.4	-20 1	9.18	9.3	A2	4	..	18288b
34	2090	35.1	-20 27	9.2	9.2	Ao	5	..	18288b	84	2063	35.4	-21 19	9.8	10.1	F8	1	..	44433b
35	5858	35.1	-23 46	10.9	9.3	Ao	1	..	44381b	85	5732	35.4	-24 20	9.5	9.5	Ko	1	..	44381b
36	4854	35.1	-25 55	10.2	9.3	Go	2	..	44433b	86	4724	35.4	-26 14	8.7	8.9	Go	2	..	20856b
37	4712	35.1	-29 45	9.0	9.7	K2	2	..	44428b	87	4723	35.4	-26 41	6.74	6.5	B3	..	5,3-	28,200
38	4711	35.1	-29 54	8.35	8.5	B8	7	..	42915b	88	3776	35.4	-36 11	9.3	9.9	A2	2	..	18435b
39	R	35.1	-35 15	9.3	8.7	A5	5	..	42915b	89	3335	35.4	-45 19	8.00	8.2	A5	7	..	20786b
40	3750	35.1	-35 35	7.9	8.5	Ko	4	..	42915b	90	334	35.5	+74 14	7.7	8.3	Go	5	..	37559i
41	3773	35.1	-36 16	5.74	5.7	B5	..	0,5-	56,124	91	1660	35.5	+44 36	8.9	9.3	F5	1	..	37463i
42	3521	35.1	-38 33	6.24	7.2	G5	..	5,6	56,124	92	1667	35.5	+35 58	9.1	10.2	K2	1	..	37448i
43	859	35.1	-59 21	9.3	9.4	A5	2	..	12757b	93	1670	35.5	+35 42	9.0	10.0	Ko	1	..	37448i
44	851	35.1	-61 39	8.0	8.4	B9	6	..	18486b	94	1635	35.5	+17 36	9.0	10.0	Ko	1	..	37570i
45	1625	35.2	+26 8	8.6	9.7	K2	2	E	38172i	95	1624	35.5	+15 34	8.5	9.5	Ko	2	..	37570i
46	1800	35.2	+7 26	9.4	9.4	A	1	..	37581i	96	1746	35.5	+5 13	8.3	9.3	Ko	4	..	12755b
47	1781	35.2	-0 36	9.0	9.0	Ao	3	..	12772b	97	1797	35.5	-1 36	8.3	8.3	B9	3	..	37580i
48	2231	35.2	-6 31	9.1	10.1	Ko	2	..	44418b	98	2206	35.5	-5 18	10.1	10.1	A	1	..	44418b
49	1966	35.2	-15 36	7.25	8.43	K5	3	..	18976b	99	2052	35.5	-11 51	8.1	8.1	B9	5	..	12673b
50	2081	35.2	-17 38	7.4	7.4	Ao	3	2,10	8903b	100	2080	35.5	-14 44	9.8	9.8	Ao	2	..	24594b



## THE HENRY DRAPER CATALOGUE.

61700

7<sup>h</sup> 35<sup>m</sup>.5

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1967	35.5	-15 14	9.4	10.2	G5	2	..	24594b	51	1969	35.7	-15 38	9.8	10.2	F5	3	..	24594b
2	2088	35.5	-17 14	10.6	10.7	A3	2	..	24594b	52	1954	35.7	-18 18	10.5	10.6	A2	2	..	24594b
3	..	35.5	-18 28	..	..	Ao	2	..	18288b	53	2001	35.7	-19 28	9.4	9.8	Ko	2	..	18288b
4	1951	35.5	-19 3	10.1	10.1	Ao	3	..	24594b	54	2098	35.7	-20 35	8.9	9.2	Ao	5	..	18288b
5	1999	35.5	-19 26	9.2	9.0	Fo	5	..	18288b	55	5881	35.7	-23 7	7.9	8.6	Ko	5	..	18301b
6	2064	35.5	-21 58	8.1	7.7	B9	6	..	18301b	56	5876	35.7	-23 46	10.9	9.3	Ko	2	..	44381b
7	4666	35.5	-29 0	8.7	8.1	Ao	5	..	20856b	57	5743	35.7	-24 51	10.9	9.2	Ao	3	..	44433b
8	4883	35.5	-30 47	10.0	9.4	K2	2	..	42915b	58	4867	35.7	-25 36	8.1	8.9	K2	2	..	20856b
9	4864	35.5	-31 4	7.9	8.5	B1	4	R	42909b	59	4674	35.7	-28 57	7.34	8.0	K2	6	2,8	20856b
10	3780	35.5	-34 35	8.9	8.7	B8	6	..	42915b	60	4008	35.7	-33 8	9.9	9.1	A	2	..	42909b
11	3286	35.5	-40 34	8.3	9.0	A3	4	..	20785b	61	3756	35.7	-37 41	11.0	10.4	A	1	..	18435b
12	3425	35.5	-43 22	9.2	8.2	Ao	4	..	20786b	62	3231	35.7	-41 18	8.6	9.0	Fo	3	..	20785b
13	3192	35.5	-47 28	9.4	8.8	A	6	R	39929b	63	3619	35.7	-44 36	7.9	7.8	B8	8	..	20786b
14	3193	35.5	-47 29	8.2	8.4	G	..	..	56,124	64	1291	35.7	-55 57	8.6	8.8	B9	7	..	24589b
15	3091	35.5	-48 22	5.65	6.9	F5p	..	3,2 R	56,124	65	759	35.7	-63 59	9.0	9.0	Ao	6	..	18486b
16	2890	35.5	-50 22	10.2	10.2	A5	2	..	24589b	66	506	35.8	+67 6	8.0	8.1	A5	5	..	37713i
17	1751	35.6	+22 21	7.39	7.45	A2	5	..	37494i	67	1098	35.8	+57 3	8.6	8.7	A2	4	2,3	37526i
18	1724	35.6	+14 38	8.7	9.0	Fo	3	..	37570i	68	1759	35.8	+37 20	7.7	8.0	Fo	6	..	37448i
19	1593	35.6	+10 21	9.0	9.8	G5	1	..	37581i	69	1663	35.8	+21 52	9.5	9.9	F5	2	..	37494i
20	1753	35.6	+ 6 49	9.0	9.3	F	1	..	37581i	70	1749	35.8	+ 5 49	8.1	8.1	B8	4	..	37580i
21	1781	35.6	+ 4 18	7.7	8.7	Ko	6	..	37580i	71	2041	35.8	+ 0 52	8.14	8.14	Ao	5	..	37580i
22	1738	35.6	+ 2 52	8.7	9.5	G5	2	..	37580i	72	2082	35.8	-15 2	5.15	6.15	Ko	5	0,5-	2399b
23	2007	35.6	- 3 28	9.1	9.2	A2	3	..	12772b	73	1955	35.8	-18 26	9.6	10.4	G5	2	5,1	24594b
24	2233	35.6	- 6 41	9.1	9.9	G5	1	..	44419b	74	2003	35.8	-19 26	6.08	7.6	Ko	5	..	8903b
25	2074	35.6	-16 20	8.5	8.9	F5	2	..	18976b	75	2100	35.8	-21 4	9.2	9.5	A2	3	..	18288b
26	2076	35.6	-16 57	8.7	9.5	G5	4	..	24594b	76	5744	35.8	-24 9	10.9	9.3	Ao	1	..	44381b
27	2089	35.6	-17 14	9.1	10.5	Mb	3	..	24594b	77	5746	35.8	-24 29	7.5	9.0	K5	4	..	18301b
28	2090	35.6	-17 57	10.3	10.3	B9	2	..	24594b	78	4870	35.8	-25 19	9.5	8.9	B5	4	..	44433b
29	1953	35.6	-18 49	10.5	10.5	Ao	1	..	18288b	79	4891	35.8	-30 25	9.5	8.6	Ao	4	..	44428b
30	1952	35.6	-18 50	9.1	10.3	K5	1	..	18288b	80	4874	35.8	-31 49	10.2	9.1	Go	2	..	42909b
31	2097	35.6	-20 31	9.4	9.8	Ao	2	..	18288b	81	4010	35.8	-33 51	9.3	9.1	Ko	3	..	42915b
32	1971	35.6	-23 3	7.9	8.3	G5	5	..	18301b	82	3196	35.8	-47 19	9.2	9.3	F8	2	..	20786b
33	5875	35.6	-23 37	9.0	8.9	Ko	4	..	18301b	83	1293	35.8	-55 32	9.1	10.5	K5	2	..	24589b
34	4864	35.6	-25 55	10.7	9.2	A	1	..	20856b	84	950	35.8	-58 42	9.4	9.4	Ao	2	..	12757b
35	4670	35.6	-28 47	9.7	9.2	F8	2	..	44428b	85	760	35.8	-63 4	8.9	8.9	Ao	8	0,3	18486b
36	4726	35.6	-29 34	9.7	9.1	Ao	2	..	42915b	86	734	35.8	-64 31	9.9	10.2	F	1	..	15274b
37	4724	35.6	-29 48	9.7	8.8	B9	4	..	42915b	87	1713	35.9	+18 17	8.1	8.5	F5	4	R	37570i
38	4006	35.6	-33 32	9.3	9.1	K2	2	..	42915b	88	1848	35.9	+ 8 40	8.44	8.50	A2	4	..	37581i
39	4005	35.6	-34 1	9.9	9.1	A	3	..	42915b	89	1847a	35.9	+ 8 37	var.	var.	Mb	..	R	56,200
40	2606	35.6	-51 25	7.3	7.6	Ao	9	..	24589b	90	2209	35.9	- 5 31	8.7	9.8	K2	1	..	20802b
41	1393	35.6	-56 59	7.9	8.3	A2	6	..	12757b	91	2165	35.9	- 9 8	8.9	8.9	Ao	3	..	20802b
42	782	35.6	-67 4	8.6	9.6	Ko	3	..	15274b	92	..	35.9	-17 52	..	..	Ao	1	..	24594b
43	752	35.6	-70 1	8.52	8.6	Fo	5	5,4	15274b	93	1957	35.9	-18 19	8.9	10.1	K5	2	0,1	24594b
44	296	35.7	+76 16	8.7	9.2	F8	3	..	37559i	94	1958	35.9	-18 36	8.4	9.4	Ko	6	..	18288b
45	1301	35.7	+46 3	7.8	8.8	Ko	5	..	37463i	95	..	35.9	-19 3	..	..	Ao	2	..	24594b
46	1789	35.7	+23 45	8.4	8.8	F5	3	..	37494i	96	2066	35.9	-21 35	10.1	9.8	Ao	1	..	44433b
47	1787	35.7	+23 19	7.96	7.96	Ao	3	..	37494i	97	4676	35.9	-29 2	8.9	9.2	K5	2	..	44428b
48	1711	35.7	+18 28	8.2	8.2	Ao	5	..	37570i	98	4012	35.9	-33 5	9.3	8.6	A	2	..	42909b
49	2118	35.7	- 7 57	5.99	6.05	A2	7	0,9	18560b	99	3785	35.9	-34 7	8.0	8.5	K2	5	..	42915b
50	2054	35.7	-11 31	6.61	7.68	K2	5	..	12673b	100	3761	35.9	-36 0	9.3	9.9	A3	2	..	18435b



## ANNALS OF HARVARD COLLEGE OBSERVATORY.

61800

7<sup>h</sup> 35<sup>m</sup>.9

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	3761	35.9	-37 40	10.3	10.1	A2	1	..	18435b	51	4879	36.1	-31 16	10.2	8.5	B5	4	R	44428b
2	1390	35.9	-53 46	8.8	9.1	A2	5	..	24589b	52	3764	36.1	-37 16	9.9	9.6	A3	3	..	18435b
3	1334	35.9	-54 57	10.1	10.5	F5	1	..	24589b	53	2965	36.1	-49 27	9.1	9.5	A5	5	..	24589b
4	994	36.0	+61 26	9.2	9.5	F	1	..	37676i	54	2612	36.1	-51 47	10.5	10.2	A2	2	..	24589b
5	1549	36.0	+30 24	7.11	8.18	K2	7	..	37569i	55	1239	36.1	-52 16	8.7	9.5	Ko	3	..	24589b
6	1740	36.0	+24 17	8.2	8.3	A3	3	..	37494i	56	1391	36.1	-53 53	7.7	9.1	K5	5	..	24589b
7	1645	36.0	+11 45	9.4	9.4	A	2	..	37570i	57	1242	36.2	+52 53	8.6	9.0	F5	1	E	37409i
8	1877	36.0	+1 22	8.7	9.5	G5	2	..	37580i	58	1670	36.2	+36 50	8.5	8.9	F5	4	0.4	37448i
9	1798	36.0	-1 11	9.0	9.6	Go	2	..	37580i	59	1657	36.2	+34 14	6.00	6.28	Fo	..	5.8	56,84
10	2045	36.0	-4 33	9.1	9.4	F2	2	..	20802b	60	1648	36.2	+11 7	8.7	8.7	Ao	3	..	37570i
11	2237	36.0	-6 29	8.1	8.5	F5	5	..	20802b	61	1742	36.2	+9 26	8.3	9.3	Ko	2	..	37581i
12	2234	36.0	-6 52	9.2	9.7	F8	2	..	44419b	62	1801	36.2	-1 19	8.3	8.3	B9	4	..	37580i
13	2235	36.0	-7 4	8.1	8.4	Fo	6	2.3	20802b	63	2239	36.2	-7 5	8.7	9.8	K2	1	..	20802b
14	2169	36.0	-9 19	8.1	9.1	Ko	3	..	20802b	64	2026	36.2	-8 8	8.5	9.6	K2	3	..	44419b
15	2154	36.0	-10 21	9.6	9.6	Ao	2	..	44419b	65	2089	36.2	-14 17	9.2	9.2	Ao	2	..	24594b
16	2153	36.0	-10 31	9.2	9.2	Ao	3	..	44419b	66	2086	36.2	-15 3	9.16	10.51	Ma	2	..	24594b
17	2087	36.0	-13 5	8.5	8.5	B8	4	..	12673b	67	..	36.2	-17 8	..	..	Ao	1	..	24594b
18	2162	36.0	-13 55	10.1	11.1	K	1	..	24594b	68	2094	36.2	-17 32	9.8	10.8	Ko	2	..	24594b
19	2084	36.0	-14 25	8.5	8.6	A2	3	..	12673b	69	1960	36.2	-18 53	10.5	11.3	G5	2	..	24594b
20	..	36.0	-16 38	..	..	F5	1	..	24594b	70	2104	36.2	-20 48	8.9	9.5	A3	3	..	18288b
21	2093	36.0	-17 10	10.5	11.1	Go	1	..	24594b	71	2071	36.2	-22 5	9.6	9.3	Fo	2	..	44433b
22	2091	36.0	-17 38	9.8	9.8	B9	4	..	18288b	72	5899	36.2	-23 6	11.4	9.6	Ao	1	..	44433b
23	2092	36.0	-17 44	9.6	9.7	A2	4	..	18288b	73	5900	36.2	-23 15	11.2	9.3	Ao	3	R	18301b
24	2005	36.0	-19 54	9.4	9.2	B9	4	..	18288b	74	4741	36.2	-26 21	7.9	8.1	A3	4	..	20856b
25	5748	36.0	-24 19	7.5	8.7	Ko	6	..	18301b	75	4901	36.2	-30 12	10.2	9.1	Ao	2	..	44428b
26	4896	36.0	-30 10	10.7	9.4	Ao	1	..	44428b	76	4269	36.2	-32 29	8.7	8.5	A2	4	..	42909b
27	4266	36.0	-32 20	7.52	8.2	Oe5	7	R	42909b	77	3768	36.2	-36 0	8.9	9.3	F5	3	..	42909b
28	3764	36.0	-35 27	7.8	8.4	Fo	8	..	42915b	78	3767	36.2	-37 54	5.74	5.62	B5	..	2.6 R	56,124
29	3785	36.0	-36 17	7.9	8.5	B8	7	..	42909b	79	3436	36.2	-43 15	10.9	9.3	A	1	..	20786b
30	3762	36.0	-37 7	9.3	9.0	B9	4	..	42909b	80	3438	36.2	-43 44	9.0	8.2	Ao	5	..	20786b
31	3531	36.0	-38 4	4.91	4.74	B3	..	0.9 R	56,124	81	2897	36.2	-50 21	7.64	8.2	G5	8	..	24589b
32	3532	36.0	-38 37	7.7	8.7	Ko	3	..	18435b	82	862	36.2	-59 7	8.9	9.9	Ko	1	..	12757b
33	3199	36.0	-47 45	9.0	9.0	F5	3	..	20786b	83	591	36.3	+64 56	7.85	8.27	F5	5	0.3	37713i
34	785	36.0	-67 9	7.8	7.9	A2	7	3.4	8913b	84	1454	36.3	+27 14	8.8	8.9	A5	2	E	37569i
35	1644	36.1	+31 26	9.1	9.7	G	1	..	37569i	85	1737	36.3	+13 44	6.10	7.45	Ma	9	..	37570i
36	1792	36.1	+23 9	7.63	8.63	Ko	3	..	37494i	86	1599	36.3	+9 57	8.17	8.73	Go	3	..	37581i
37	1627	36.1	+15 48	7.5	8.5	Ko	3	..	37570i	87	1758	36.3	+3 52	5.87	5.87	Ao	8	..	37580i
38	2047	36.1	-4 42	9.1	9.5	F5	2	..	20802b	88	2212	36.3	-5 15	9.8	9.8	Ao	3	0.1	44418b
39	2238	36.1	-6 41	8.9	9.0	A2	3	..	20802b	89	1961	36.3	-18 30	10.1	10.4	Fo	1	..	18288b
40	2121	36.1	-8 5	9.0	9.1	A2	3	..	44419b	90	2006	36.3	-19 38	10.1	9.6	A2	2	..	18288b
41	2163	36.1	-14 0	9.8	9.8	A	3	..	24594b	91	2106	36.3	-20 31	8.9	9.0	Fo	5	..	18288b
42	..	36.1	-16 32	..	..	A2	2	..	24594b	92	2107	36.3	-21 0	8.9	10.1	K5	1	..	18288b
43	2077	36.1	-16 51	10.1	10.1	A	2	..	24594b	93	2072	36.3	-21 42	8.47	8.1	B8	5	..	18301b
44	..	36.1	-17 56	..	..	Ko	1	..	24594b	94	1974	36.3	-22 10	9.2	9.6	Ko	2	..	44433b
45	1959	36.1	-19 2	10.1	10.1	Ao	3	..	24594b	95	4882	36.3	-25 42	10.4	9.3	Go	3	..	44433b
46	2069	36.1	-21 49	7.14	8.3	Ko	5	..	18301b	96	4742	36.3	-29 27	9.2	9.2	Ko	2	..	44428b
47	2070	36.1	-22 3	9.6	9.8	B9	2	..	44433b	97	3790	36.3	-34 33	9.5	9.4	A5	3	..	42915b
48	1973	36.1	-23 0	10.1	9.3	Ao	2	..	18301b	98	3788	36.3	-36 56	8.6	9.3	A5	2	..	18435b
49	4736	36.1	-29 26	11.2	9.2	Ao	1	..	44428b	99	3768	36.3	-38 1	5.78	5.9	B5	..	2.6 R	28,200
50	4737	36.1	-29 56	7.27	8.5	Ko	7	..	44428b	100	3353	36.3	-45 4	9.60	9.3	A3	2	..	20786b

THE HENRY DRAPER CATALOGUE.

61900

7<sup>h</sup> 36<sup>m</sup>.3

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	3318	36.3	-46 3	9.6	9.9	G5	1	..	20786b	51	438	36.6	+69 24	7.19	7.47	Fo	7	0,8	37559i
2	2899	36.3	-50 50	8.5	8.2	F8	8	..	24589b	52	1611	36.6	+32 15	8.8	9.4	G	2	..	37569i
3	1337	36.3	-54 24	8.1	8.5	F8	7	..	24589b	53	1553	36.6	+30 4	9.21	9.63	F5	2	..	37569i
4	666	36.3	-70 17	7.38	8.0	Ko	7	..	15168b	54	2102	36.6	-14 37	9.0	9.0	B9	4	..	24594b
5	267	36.3	-78 58	9.4	9.4	Ao	6	..	20652b	55	1975	36.6	-16 3	9.8	9.8	Ao	2	..	24594b
6	335	36.4	+74 17	7.14	8.14	Ko	5	..	37559i	56	..	36.6	-16 3	..	..	F8	2	R	24594b
7	592	36.4	+65 24	6.98	7.32	F2	7	..	37713i	57	2081	36.6	-16 55	7.9	7.9	B8	5	..	18976b
8	1662	36.4	+44 44	9.32	9.74	F5	2	..	37463i	58	2097	36.6	-17 37	10.5	10.5	Ao	2	..	24594b
9	1663	36.4	+44 7	8.6	9.4	G5	1	..	37463i	59	1964	36.6	-18 18	9.8	9.8	B8	4	..	18288b
10	1992	36.4	+39 39	9.8	10.8	Ko	1	..	37463i	60	1978	36.6	-22 11	9.0	9.0	Go	2	..	44381b
11	1587	36.4	+29 4	8.1	9.3	K5	3	..	37569i	61	5927	36.6	-23 51	8.7	8.0	Ao	6	..	18301b
12	1668	36.4	+21 12	8.6	9.4	G5	3	..	37494i	62	4910	36.6	-30 16	9.7	8.8	B9	2	..	44428b
13	1729	36.4	+14 26	5.81	7.16	Mb	9	..	37570i	63	3441	36.6	-43 10	10.2	10.5	Mb	..	..	M
14	2159	36.4	-10 10	8.76	9.54	G5	3	..	44419b	64	3442	36.6	-43 38	9.2	9.0	A2	4	..	20786b
15	2095	36.4	-17 57	10.7	10.7	Ao	2	..	24594b	65	3205	36.6	-47 19	8.2	7.9	B9	6	..	20786b
16	1962	36.4	-18 16	10.5	10.5	Ao	1	..	18288b	66	1242	36.6	-53 2	6.22	6.2	Ao	7	0,4	8951b
17	1977	36.4	-22 28	10.2	9.8	Ao	1	..	44433b	67	1394	36.6	-53 56	8.9	8.9	Fo	7	..	24589b
18	4889	36.4	-25 13	11.2	9.2	B9	3	..	44433b	68	854	36.6	-62 4	8.6	8.7	A2	3	..	18486b
19	4389	36.4	-27 59	7.9	8.9	K2	3	..	20856b	69	783	36.6	-65 23	9.0	9.8	G5	1	..	15274b
20	4684	36.4	-28 41	8.3	8.9	Ma	3	5,1	44428b	70	1474	36.7	+45 35	8.6	9.4	G5	1	..	37463i
21	4745	36.4	-29 43	10.9	8.8	B9	3	..	44428b	71	1753	36.7	+22 6	8.8	8.8	Ao	2	..	37494i
22	4747	36.4	-29 50	10.9	9.1	Ao	2	..	44428b	72	1715	36.7	+18 16	9.2	9.3	A2	2	..	37570i
23	4884	36.4	-31 55	9.3	9.2	Ao	2	..	42909b	73	1643	36.7	+17 22	9.2	9.5	F	2	..	37570i
24	3771	36.4	-37 9	9.2	8.8	B9	6	..	42909b	74	2213	36.7	- 5 53	9.2	9.3	A2	1	..	20802b
25	3770	36.4	-37 20	6.02	5.9	B3	..	2,7-	28,200	75	2242	36.7	- 6 30	9.1	9.5	F5	2	..	20802b
26	3538	36.4	-38 19	8.3	7.2	B8	3	..	42928b	76	2126	36.7	- 7 37	8.3	9.4	K2	1	..	20802b
27	3475	36.4	-40 2	8.40	8.5	Ao	4	..	18435b	77	2030	36.7	- 8 59	8.1	9.5	Ma	1	..	20802b
28	3321	36.4	-46 29	9.0	9.0	Ao	3	..	20786b	78	2162	36.7	-10 29	9.1	9.7	Go	2	..	44419b
29	786	36.4	-67 22	8.7	9.5	G5	6	..	15274b	79	1976	36.7	-15 30	9.6	9.9	F2	2	..	24594b
30	456	36.4	-75 58	9.2	10.0	G5	3	..	20652b	80	2098	36.7	-17 53	9.1	10.2	K2	2	..	18288b
31	1460	36.5	+50 40	5.28	5.28	Ao	..	..	56,84	81	..	36.7	-18 6	..	..	Ao	1	..	24594b
32	1728	36.5	+43 28	8.6	8.6	B9	6	..	37463i	82	2008	36.7	-19 23	10.1	9.5	A	2	..	24594b
33	1788	36.5	+ 4 38	7.9	7.9	B9	3	..	37580i	83	2112	36.7	-20 8	8.73	9.0	F5	4	..	18288b
34	2029	36.5	- 8 51	9.1	9.2	A2	3	..	44418b	84	5930	36.7	-24 2	7.9	8.4	Ko	4	..	18301b
35	2172	36.5	- 9 19	4.07	5.07	Ko	..	R	1852c	85	4895	36.7	-25 17	11.4	9.2	A	1	..	20856b
36	2099	36.5	-14 49	8.7	9.0	F2	4	..	24594b	86	4750	36.7	-26 7	10.0	8.9	Go	1	..	20856b
37	1974	36.5	-15 38	9.6	10.7	K2	1	..	24594b	87	4393	36.7	-27 42	6.55	6.5	B8	6	0,10	42934b
38	2080	36.5	-16 16	9.0	9.4	F5	1	..	18976b	88	4757	36.7	-29 53	10.7	9.1	Ao	3	..	44428b
39	1963	36.5	-18 24	10.1	10.2	A2	2	..	18288b	89	4028	36.7	-33 11	7.8	7.9	F8	7	..	42909b
40	2109	36.5	-20 43	8.1	8.1	Ao	8	..	18288b	90	4027	36.7	-33 49	8.6	8.2	B9	7	..	42915b
41	2111	36.5	-21 3	9.8	9.8	A	1	..	18288b	91	3399	36.7	-42 14	8.5	8.5	A2	5	..	20785b
42	5770	36.5	-24 49	10.7	9.8	Ko	1	..	44433b	92	3630	36.7	-44 32	9.4	8.4	Ao	3	..	20786b
43	4752	36.5	-29 49	7.41	7.7	B9	7	..	44428b	93	2973	36.7	-49 58	9.09	9.2	A2	5	..	24589b
44	4751	36.5	-29 51	6.90	6.8	B5	4	..	42934b	94	474	36.8	+70 27	7.14	7.70	Go	6	0,7	37559i
45	3773	36.5	-35 18	9.2	9.6	A2	2	..	18435b	95	1666	36.8	+44 2	7.19	7.97	G5	7	..	37463i
46	3396	36.5	-43 3	7.2	6.6	Ao	3	0,2	42928b	96	1649	36.8	+31 29	8.8	9.2	F5	3	..	37569i
47	3102	36.5	-48 49	7.12	6.7	B8	3	..	8951b	97	1754	36.8	+22 27	7.12	7.54	F5	6	..	37494i
48	1241	36.5	-52 43	8.4	8.5	B3	8	..	24589b	98	1717	36.8	+17 56	8.4	8.5	A2	5	..	37570i
49	1299	36.5	-56 0	7.0	8.3	Ko	8	..	24589b	99	1749	36.8	+ 2 32	10.0	10.1	A2	2	..	12755b
50	659	36.5	-68 49	6.99	7.1	B8	6	0,7	9003b	100	2112	36.8	-14 35	8.5	8.5	Ao	3	..	12673b

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7<sup>h</sup> 36<sup>m</sup>.8

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1967	36.8	-18 45	8.5	8.5	B <sub>9</sub>	9	..	18288b	51	1979	37.0	-15 18	9.6	9.7	A <sub>2</sub>	3	..	24594b
2	1965	36.8	-18 58	8.7	8.7	B <sub>9</sub>	6	..	18288b	52	1981	37.0	-16 4	8.9	9.3	F <sub>5</sub>	4	..	24594b
3	2009	36.8	-19 17	9.6	9.3	F	3	..	24594b	53	1968	37.0	-18 56	9.1	9.0	B <sub>5</sub>	4	..	18288b
4	2074	36.8	-21 25	10.1	10.1	K <sub>5</sub>	1	0,1	18288b	54	4900	37.0	-25 24	9.3	8.6	A <sub>0</sub>	3	..	20856b
5	1980	36.8	-22 29	10.1	9.8	A <sub>2</sub>	1	..	44433b	55	4701	37.0	-28 43	9.5	8.6	B <sub>9</sub>	4	0,2	44428b
6	4763	36.8	-29 30	9.7	9.7	F <sub>0</sub>	1	..	44428b	56	4771	37.0	-29 19	9.0	9.1	G <sub>5</sub>	4	R	44428b
7	4760	36.8	-29 33	9.5	9.1	F <sub>0</sub>	3	..	44428b	57	4772	37.0	-29 31	10.0	9.2	A <sub>0</sub>	3	..	44428b
8	4764	36.8	-29 56	9.50	9.1	B <sub>9</sub>	3	..	44428b	58	4910	37.0	-31 25	6.64	8.5	G <sub>0p</sub>	3	0,9 R	42934b
9	3480	36.8	-39 23	9.2	9.6	A <sub>0</sub>	3	..	18435b	59	3482	37.0	-39 18	9.3	9.3	F <sub>5</sub>	2	..	18435b
10	3325	36.8	-46 49	8.5	8.2	B <sub>8</sub>	6	..	20786b	60	3404	37.0	-42 7	9.2	8.7	F <sub>8</sub>	2	..	20785b
11	1301	36.8	-55 30	8.2	9.2	G <sub>5</sub>	4	..	24589b	61	3636	37.0	-44 12	7.5	7.9	G <sub>5</sub>	6	..	20786b
12	762	36.8	-63 49	9.5	10.1	G <sub>0</sub>	2	..	15274b	62	3634	37.0	-44 56	8.54	8.4	F <sub>5</sub>	4	..	20786b
13	452	36.8	-74 50	9.4	10.4	K <sub>0</sub>	2	..	20652b	63	1342	37.0	-54 50	8.9	9.7	G <sub>5</sub>	3	..	24589b
14	237	36.9	+80 46	8.8	9.8	K <sub>0</sub>	1	..	37493i	64	785	37.0	-65 41	8.2	9.2	K <sub>0</sub>	6	..	15274b
15	732	36.9	+63 37	8.6	9.6	K <sub>0</sub>	2	..	37713i	65	314	37.1	+75 17	8.87	9.97	K <sub>0</sub>	2	..	37559i
16	1741	36.9	+13 28	8.8	9.6	G <sub>5</sub>	2	..	37570i	66	593	37.1	+65 42	6.00	7.00	K <sub>0</sub>	8	..	37713i
17	1762	36.9	+2 59	8.7	9.5	G <sub>5</sub>	2	..	37580i	67	995	37.1	+61 8	9.2	9.2	A <sub>0</sub>	3	..	37409i
18	2243	36.9	-6 55	7.9	8.2	F <sub>0</sub>	7	0,4	20802b	68	1476	37.1	+45 36	7.61	8.61	K <sub>0</sub>	7	..	37463i
19	2174	36.9	-9 12	10.5	10.5	A <sub>0</sub>	2	..	44418b	69	1613	37.1	+32 40	7.8	9.2	Ma	4	..	37569i
20	2175	36.9	-9 14	9.1	9.4	F <sub>0</sub>	5	..	44418b	70	1648	37.1	+16 58	8.8	8.8	A	2	..	37570i
21	2165	36.9	-10 33	8.1	9.1	K <sub>0</sub>	4	..	44419b	71	1633	37.1	+15 30	9.0	9.6	G	2	..	37570i
22	2063	36.9	-11 8	9.0	9.8	G <sub>5</sub>	1	..	44419b	72	1816	37.1	+7 42	9.0	9.0	B <sub>9</sub>	5	..	37581i
23	1978	36.9	-15 38	9.1	9.1	A <sub>0</sub>	3	..	18976b	73	1764	37.1	+3 32	8.3	9.1	G <sub>5</sub>	3	..	37580i
24	..	36.9	-16 15	..	..	A <sub>2</sub>	2	..	24594b	74	2216	37.1	-5 34	8.1	8.5	F <sub>5</sub>	3	..	20802b
25	..	36.9	-17 58	..	..	A <sub>0</sub>	2	..	24594b	75	2034	37.1	-8 28	9.2	10.4	K <sub>5</sub>	1	..	44418b
26	2010	36.9	-20 6	8.38	9.3	F <sub>8</sub>	5	..	18288b	76	2180	37.1	-9 20	9.6	9.6	A <sub>0</sub>	1	..	44418b
27	2114	36.9	-21 1	7.7	8.4	K <sub>5</sub>	4	..	18288b	77	2167	37.1	-10 10	8.81	8.89	A <sub>3</sub>	3	..	44419b
28	2075	36.9	-21 16	9.6	9.5	A	1	..	18288b	78	2168	37.1	-10 30	9.4	9.4	A <sub>0</sub>	3	..	44419b
29	2076	36.9	-21 38	10.1	9.6	A <sub>0</sub>	2	..	44433b	79	..	37.1	-16 52	..	..	A <sub>0</sub>	2	..	24594b
30	5775	36.9	-24 21	9.0	8.9	F <sub>8</sub>	3	..	44381b	80	2101	37.1	-17 12	10.1	10.1	A <sub>0</sub>	3	..	24594b
31	4759	36.9	-26 57	9.0	9.2	K <sub>0</sub>	1	..	20856b	81	2102	37.1	-17 51	9.6	9.6	A <sub>0</sub>	3	..	18288b
32	4767	36.9	-29 46	8.3	8.0	B <sub>9</sub>	7	..	44428b	82	2077	37.1	-22 6	6.43	8.3	Ma	7	..	18301b
33	4906	36.9	-31 16	8.06	8.2	A <sub>0</sub>	7	..	42909b	83	5944	37.1	-23 56	9.5	8.4	G <sub>0</sub>	3	..	18301b
34	3481	36.9	-39 11	6.60	7.8	K <sub>0</sub>	4	0,8	42928b	84	4765	37.1	-26 46	9.5	9.0	A <sub>0</sub>	3	..	20856b
35	3400	36.9	-42 5	9.6	8.8	B <sub>9</sub>	2	..	20785b	85	3777	37.1	-35 24	9.3	9.6	F <sub>8</sub>	1	..	18435b
36	3362	36.9	-45 44	7.4	8.5	Ma	3	..	20786b	86	3546	37.1	-38 16	9.5	9.0	F <sub>2</sub>	2	..	18435b
37	1341	36.9	-54 48	9.9	10.0	A <sub>2</sub>	2	..	24589b	87	3547	37.1	-38 39	8.3	9.0	G <sub>5</sub>	3	..	18435b
38	662	36.9	-68 17	8.1	8.2	A <sub>2</sub>	4	..	8913b	88	3366	37.1	-45 7	7.40	8.4	K <sub>2</sub>	6	..	20786b
39	319	36.9	-77 51	7.9	8.5	G <sub>0</sub>	9	..	20652b	89	2906	37.1	-50 39	8.5	9.1	K <sub>0</sub>	5	..	24589b
40	113	36.9	-87 7	8.5	8.8	F <sub>2</sub>	4	..	15145b	90	1343	37.1	-54 4	8.5	8.5	A <sub>3</sub>	9	..	24589b
41	1304	37.0	+46 1	8.9	9.0	A <sub>2</sub>	2	..	37463i	91	869	37.1	-60 23	7.1	7.6	A <sub>0</sub>	4	1,7	8913b
42	1570	37.0	+33 23	8.6	8.9	F <sub>2</sub>	3	..	37569i	92	763	37.1	-63 42	8.4	8.4	A <sub>0</sub>	4	0,8	8913b
43	1557	37.0	+30 32	8.8	9.6	G <sub>5</sub>	2	..	37569i	93	458	37.1	-76 52	7.31	7.2	A <sub>0</sub>	10	..	20652b
44	1590	37.0	+29 7	4.26	5.26	K <sub>0</sub>	..	R	1869c	94	270	37.2	+78 28	8.0	8.5	F <sub>8</sub>	3	..	37493i
45	1796	37.0	+23 41	var.	var.	Md	..	R	56,200	95	1235	37.2	+56 23	8.4	8.8	F <sub>5</sub>	3	0,4	37676i
46	1730	37.0	+14 17	9.0	9.5	F <sub>8</sub>	2	..	37570i	96	1635	37.2	+15 19	8.5	9.3	G <sub>5</sub>	1	..	37570i
47	2032	37.0	-8 17	9.6	9.6	A <sub>0</sub>	2	..	44419b	97	1764	37.2	+6 53	8.7	8.8	A <sub>3</sub>	2	..	37581i
48	2033	37.0	-8 23	10.1	10.1	A <sub>0</sub>	1	..	44418b	98	2245	37.2	-6 51	9.2	9.2	A <sub>0</sub>	2	..	20802b
49	2176	37.0	-9 15	9.1	9.1	B <sub>9</sub>	3	3,1	20802b	99	2129	37.2	-14 29	Neb.	Neb.	Pd	..	R	76,22
50	2166	37.0	-11 1	8.9	9.9	K <sub>0</sub>	2	..	44419b	100	..	37.2	-16 29	..	..	A <sub>2</sub>	4	..	24594b

THE HENRY DRAPER CATALOGUE.

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7<sup>h</sup> 37<sup>m</sup>.2

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	..	37.2	—16 58	..	..	Ao	2	..	24594b	51	3803	37.4	—36 38	7.5	8.8	K <sub>2</sub>	5	..	42909b
2	2103	37.2	—17 13	10.7	10.8	A <sub>3</sub>	2	..	24594b	52	3785	37.4	—37 42	8.7	8.8	F <sub>5</sub>	3	..	18435b
3	2117	37.2	—20 29	8.7	8.7	Ao	6	..	18288b	53	..	37.4	—74 3	7.16	6.0	B <sub>9</sub>	7	R	9003b
4	2119	37.2	—21 1	8.7	8.6	Ao	5	..	18288b	54	457	37.4	—74 3	7.26	..	..	..	..	..
5	5787	37.2	—24 57	9.7	9.8	K <sub>2</sub>	1	..	44433b	55	268	37.4	—78 52	9.1	10.3	K <sub>5</sub>	3	..	20652b
6	4908	37.2	—26 1	9.7	9.8	K <sub>5</sub>	2	..	44428b	56	1349	37.5	+51 5	8.6	8.7	A <sub>5</sub>	3	..	37344i
7	4769	37.2	—26 31	11.2	9.8	Ko	1	..	44428b	57	1666	37.5	+48 59	7.8	8.1	F <sub>2</sub>	5	..	37344i
8	4775	37.2	—29 58	9.45	9.1	B <sub>9</sub>	3	..	44428b	58	1996	37.5	+39 5	7.7	9.1	Mb	2	..	37463i
9	3406	37.2	—42 52	9.6	8.7	Ao	4	..	20786b	59	1750	37.5	+24 5	9.0	9.0	A	2	..	37494i
10	3643	37.2	—44 5	9.2	8.8	A <sub>5</sub>	3	..	20786b	60	1720	37.5	+18 13	9.0	10.1	K <sub>2</sub>	1	..	37570i
11	3334	37.2	—46 33	9.6	9.6	G	1	..	20786b	61	1793	37.5	+ 4 17	7.9	8.3	F <sub>5</sub>	3	..	37580i
12	2976	37.2	—49 11	8.2	9.1	F <sub>5</sub>	7	..	24589b	62	2023	37.5	— 3 47	8.3	8.4	A <sub>5</sub>	4	..	12772b
13	1344	37.2	—54 53	9.7	10.3	Go	1	..	24589b	63	2247	37.5	— 6 16	8.9	9.9	Ko	1	..	20802b
14	865	37.2	—60 0	9.6	9.6	A	2	..	12757b	64	2171	37.5	—10 39	var.	var.	Pec.	1	R	44419b
15	764	37.2	—63 20	8.8	9.8	Ko	3	..	18486b	65	2067	37.5	—11 7	8.9	8.9	B <sub>9</sub>	5	..	44419b
16	115	37.2	—85 23	10.2	10.2	Ao	3	..	22238b	66	2105	37.5	—17 58	Neb.	Neb.	Pe	2	R	18288b
17	1236	37.3	+56 52	8.6	8.6	Ao	3	..	37676i	67	2106	37.5	—17 58	8.72	9.90	K <sub>5</sub>	4	..	18288b
18	1755	37.3	+42 33	8.2	9.6	Ma	3	..	37463i	68	1969	37.5	—18 10	9.1	9.6	F <sub>8</sub>	5	..	18288b
19	1885	37.3	+20 21	8.2	8.2	B <sub>9</sub>	4	4.5	37494i	69	1970	37.5	—18 53	10.5	10.5	A	2	..	24594b
20	1636	37.3	+15 3	9.0	9.0	Ao	2	..	37570i	70	2079	37.5	—21 8	8.6	9.3	K <sub>2</sub>	3	..	18288b
21	1651	37.3	+11 34	8.8	9.4	G	1	..	37581i	71	1986	37.5	—22 10	6.79	7.7	A <sub>3</sub>	8	..	18301b
22	4850	37.3	+ 5 14	5.63	6.98	Ma	..	0.7	56.84	72	R	37.5	—22 36	9.8	9.8	Ao	1	..	44433b
23	1756	37.3	+ 5 3	7.91	8.69	G <sub>5</sub>	3	..	37580i	73	5955	37.5	—23 9	9.5	9.3	Ko	1	..	44381b
24	1792	37.3	— 0 35	8.7	8.8	A <sub>2</sub>	3	..	37580i	74	5960	37.5	—23 21	10.0	9.3	Ko	2	..	44433b
25	2019	37.3	— 3 17	8.5	9.7	K <sub>5</sub>	4	R	12772b	75	4781	37.5	—29 46	9.5	8.6	B <sub>9</sub>	4	..	44428b
26	2020	37.3	— 3 28	9.0	9.4	F <sub>5</sub>	2	..	12772b	76	3786	37.5	—37 24	9.9	11.3	G <sub>5</sub>	1	..	18435b
27	2134	37.3	— 7 6	8.3	9.4	K <sub>2</sub>	2	..	20802b	77	1399	37.5	—53 24	9.1	9.7	A <sub>5</sub>	3	..	24589b
28	2066	37.3	—11 37	7.9	8.7	G <sub>5</sub>	4	..	12673b	78	786	37.5	—65 13	8.9	9.9	Ko	1	..	15274b
29	2134	37.3	—14 45	8.99	8.99	Ao	4	..	24594b	79	1751	37.6	+24 1	8.7	8.7	A	1	..	37494i
30	5789	37.3	—24 19	10.4	9.2	Ao	3	..	44381b	80	1794	37.6	+ 4 20	9.0	9.6	Go	2	..	12755b
31	3784	37.3	—37 14	9.5	9.6	F <sub>5</sub>	1	..	18435b	81	1885	37.6	+ 1 51	7.6	7.7	A <sub>3</sub>	7	..	37580i
32	3113	37.3	—48 16	8.8	8.5	F <sub>5</sub>	5	..	20786b	82	2218	37.6	— 5 31	8.7	8.8	A <sub>5</sub>	2	..	20802b
33	2980	37.3	—49 39	9.0	9.1	A <sub>3</sub>	4	..	24589b	83	..	37.6	— 5 59	..	..	Ma	..	..	M
34	2908	37.3	—50 20	8.3	8.8	G <sub>5</sub>	7	..	24589b	84	2250	37.6	— 7 5	8.1	8.1	Ao	7	0.3	20802b
35	1244	37.3	—52 22	9.7	10.2	F <sub>8</sub>	2	..	24589b	85	2137	37.6	— 7 17	8.9	10.1	K <sub>5</sub>	1	..	20802b
36	1243	37.3	—52 47	8.5	8.5	A <sub>3</sub>	8	..	24589b	86	2136	37.6	— 7 40	8.9	9.0	A <sub>2</sub>	3	..	20802b
37	1398	37.3	—53 18	9.5	9.8	Fo	2	..	24589b	87	2172	37.6	—10 42	8.4	9.4	Ko	4	..	44419b
38	857	37.3	—62 11	8.4	9.6	K <sub>5</sub>	2	..	18486b	88	2087	37.6	—17 5	9.4	9.5	A <sub>2</sub>	1	..	18976b
39	459	37.3	—76 47	10.4	10.4	Ao	2	..	20652b	89	1987	37.6	—22 37	10.5	9.8	G <sub>5</sub>	1	..	44433b
40	733	37.4	+63 4	6.35	6.49	A <sub>5</sub>	9	3.9	37676i	90	5800	37.6	—24 43	10.4	9.2	Ao	3	..	44381b
41	1756	37.4	+22 39	6.34	7.34	Ko	7	..	37494i	91	4779	37.6	—27 0	7.5	7.3	B <sub>8</sub>	5	..	20856b
42	1745	37.4	+13 41	9.0	9.1	A <sub>3</sub>	3	..	37570i	92	3781	37.6	—35 20	10.1	9.9	Ao	1	..	18435b
43	1605	37.4	+10 48	9.0	9.4	F <sub>5</sub>	2	..	37581i	93	3374	37.6	—45 31	9.4	8.4	B <sub>3</sub>	5	..	20786b
44	1817	37.4	+ 7 26	8.3	8.3	Ao	3	..	37581i	94	460	37.6	—76 5	10.0	10.5	F <sub>8</sub>	2	..	20652b
45	1818	37.4	+ 7 19	8.3	8.3	Ao	3	..	37581i	95	649	37.7	+64 17	6.79	6.85	A <sub>2</sub>	7	..	37676i
46	2138	37.4	—14 10	8.6	9.4	G <sub>5</sub>	2	..	12673b	96	1569	37.7	+48 38	7.60	7.88	Fo	6	..	37344i
47	..	37.4	—16 45	..	..	A <sub>2</sub>	2	..	24594b	97	1730	37.7	+43 36	8.6	8.9	F <sub>2</sub>	2	..	37463i
48	..	37.4	—16 46	..	..	Go	3	..	24594b	98	2251	37.7	— 2 27	8.1	8.1	Ao	6	..	12772b
49	5792	37.4	—24 38	9.3	8.6	B <sub>9</sub>	5	..	44381b	99	2252	37.7	— 2 49	9.0	9.1	A <sub>2</sub>	2	..	12772b
50	4287	37.4	—32 24	7.7	8.2	Oe <sub>5</sub>	5	..	42909b	100	2148	37.7	—14 52	10.3	10.3	A	2	..	24594b

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7<sup>h</sup> 37<sup>m</sup>.7

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1984	37.7	-15 7	9.8	10.1	F2	2	..	24594b	51	3795	37.9	-37 56	8.9	8.5	Ao	4	..	18435b
2	1987	37.7	-15 50	7.20	8.20	Ko	6	..	18976b	52	3497	37.9	-39 23	8.7	9.4	Fo	2	..	18435b
3	2089	37.7	-16 53	8.7	9.7	Ko	1	..	18976b	53	3417	37.9	-42 33	8.8	8.4	Ao	4	..	20785b
4	1973	37.7	-18 41	10.5	10.5	A	2	..	24594b	54	1401	37.9	-53 18	10.3	10.3	Ao	2	..	24589b
5	1974	37.7	-19 0	8.7	8.7	Ao	7	..	18288b	55	870	37.9	-59 43	8.8	8.7	Ao	4	..	15516b
6	2082	37.7	-21 11	9.2	9.8	G5	2	..	44433b	56	736	37.9	-64 4	9.7	9.8	A2	4	..	15274b
7	5966	37.7	-23 23	8.3	7.6	B9	6	..	44381b	57	1218	38.0	+55 54	7.35	7.35	Ao	4	0.8	37676i
8	4926	37.7	-31 9	9.5	8.6	A3	5	..	42909b	58	1547	38.0	+16 30	9.0	9.0	Ao	2	..	3757oi
9	3808	37.7	-36 56	9.3	9.3	Ao	2	..	18435b	59	1736	38.0	+13 54	8.8	9.2	F5	2	..	3757oi
10	3494	37.7	-39 5	9.3	9.0	Ao	3	..	18435b	60	1822	38.0	+7 29	9.0	9.0	Ao	2	..	37581i
11	3492	37.7	-39 11	8.9	9.3	G5	2	..	18435b	61	1797	38.0	+4 1	9.7	9.8	A2	2	..	12755b
12	3413	37.7	-42 57	7.6	7.1	B9	3	1,2	42928b	62	1758	38.0	+2 6	9.0	9.1	A3	2	..	12755b
13	336	37.8	+74 45	8.9	9.9	Ko	2	..	37559i	63	1888	38.0	+1 16	8.1	8.1	B9	5	..	3758oi
14	1546	37.8	+16 5	8.8	9.1	F2	3	..	3757oi	64	2054	38.0	+0 26	6.36	7.14	G5	6	..	3758oi
15	1757	37.8	+2 0	9.2	9.2	Ao	3	..	12755b	65	2220	38.0	-5 35	9.4	9.5	A2	2	..	20802b
16	2140	37.8	-7 42	9.2	10.0	G5	4	..	44418b	66	2098	38.0	-12 44	8.3	9.5	K5	..	..	M
17	2180	37.8	-13 36	7.9	7.9	Ao	4	..	12673b	67	2182	38.0	-14 3	8.9	9.0	A2	2	..	12673b
18	2179	37.8	-13 42	9.2	9.2	Ao	2	..	12673b	68	2091	38.0	-17 2	10.7	10.7	A	1	..	24594b
19	1986	37.8	-15 33	8.5	8.5	Ao	4	..	18976b	69	1978	38.0	-18 24	10.5	10.6	A2	2	..	24594b
20	1989	37.8	-16 6	8.9	10.3	Mb	2	..	24594b	70	5976	38.0	-23 26	10.7	8.9	Ao	2	..	44381b
21	1975	37.8	-18 48	10.1	11.3	K5	1	..	24594b	71	5972	38.0	-23 40	10.9	9.3	G5	2	..	44433b
22	R	37.8	-21 42	9.8	9.8	Ao	2	..	44433b	72	4927	38.0	-25 39	9.5	8.6	Ao	2	..	20856b
23	R	37.8	-21 47	9.8	9.8	Ao	1	..	44433b	73	4929	38.0	-25 45	10.7	9.2	A5	3	..	44428b
24	4792	37.8	-26 14	9.5	9.0	Fo	3	..	44428b	74	4724	38.0	-28 8	10.7	9.2	Ao	2	..	44428b
25	4042	37.8	-33 30	7.8	7.9	B8	7	..	42909b	75	4797	38.0	-29 5	9.7	8.9	B9	4	..	44428b
26	3556	37.8	-38 18	5.48	5.2	B2	9	1,9 R	42928b	76	4947	38.0	-30 7	9.25	8.5	Ao	3	..	44428b
27	3558	37.8	-39 0	7.9	7.6	B9	4	0.8	42928b	77	3498	38.0	-40 2	7.99	9.0	K5	4	0.3	20671b
28	3414	37.8	-42 41	9.4	9.3	Fo	2	..	20785b	78	3322	38.0	-40 55	7.3	7.2	B9	4	..	42928b
29	1400	37.8	-53 44	8.3	8.5	B5	8	..	24589b	79	3275	38.0	-41 39	7.3	8.1	F5	8	..	20785b
30	1755	37.9	+24 29	6.84	6.98	A5	5	..	37494i	80	1345	38.0	-54 7	9.7	10.0	Fo	3	..	24589b
31	1768	37.9	+3 7	8.3	9.3	Ko	2	..	12755b	81	768	38.0	-63 11	8.5	9.5	Ko	4	..	18486b
32	1887	37.9	+0 57	9.2	9.2	Ao	4	0.2	12755b	82	788	38.0	-67 13	8.1	8.4	F2	6	0.3	8913b
33	2025	37.9	-4 1	8.7	9.7	Ko	1	..	12772b	83	320	38.0	-77 43	10.0	10.6	Go	2	..	20652b
34	2142	37.9	-7 56	8.9	9.9	Ko	2	..	20802b	84	1717	38.1	+41 26	8.0	9.0	Ko	4	..	37463i
35	2183	37.9	-9 19	8.5	9.6	K2	2	..	20802b	85	1633	38.1	+26 1	5.40	6.58	K5	6	5,8 R	10754i
36	1992	37.9	-15 43	8.4	9.4	Ko	3	..	18976b	86	1759	38.1	+5 11	6.70	7.70	Ko	5	0.4	37553i
37	1991	37.9	-16 3	9.2	10.0	G5	2	..	24594b	87	1769	38.1	+3 22	8.7	8.7	Ao	4	..	3758oi
38	2090	37.9	-16 42	9.8	10.6	G5	2	..	24594b	88	2056	38.1	+0 12	9.0	9.0	Ao	4	..	12772b
39	..	37.9	-17 7	..	..	Ao	2	..	24594b	89	2158	38.1	-14 6	8.6	8.7	A5	2	..	12673b
40	2108	37.9	-18 2	8.9	8.9	A	5	..	18288b	90	2092	38.1	-16 24	9.1	9.2	A2	5	..	24594b
41	1976	37.9	-18 52	7.7	8.1	F5	10	..	18288b	91	1979	38.1	-18 12	10.5	10.5	Ao	2	..	18288b
42	2017	37.9	-19 27	9.8	9.5	Ao	2	..	18976b	92	2018	38.1	-19 11	8.7	9.3	K5	3	..	18288b
43	2085	37.9	-21 59	9.8	10.1	K2	1	..	44433b	93	2086	38.1	-21 42	8.5	8.1	Ao	4	..	18301b
44	5970	37.9	-23 52	9.0	8.0	A2	5	..	44381b	94	4727	38.1	-28 39	10.4	9.3	B9	1	..	44428b
45	5810	37.9	-24 58	11.2	9.8	B9	2	..	44433b	95	3225	38.1	-47 35	7.6	7.2	A2	3	..	8951b
46	4797	37.9	-26 32	10.0	9.8	K5	1	..	44428b	96	2986	38.1	-49 27	7.8	8.5	F2	7	..	24589b
47	4794	37.9	-29 51	10.4	8.8	B9	4	..	44428b	97	669	38.1	-70 20	8.7	9.2	F8	2	..	15168b
48	4796	37.9	-29 58	9.40	9.1	Ao	2	..	44428b	98	457	38.1	-74 53	9.5	10.7	K5	2	..	20652b
49	4943	37.9	-30 9	8.90	8.9	F8	3	..	44428b	99	1064	38.2	+58 46	8.5	8.9	F5	3	0.4	37676i
50	4935	37.9	-31 27	8.3	9.2	K5	2	..	42909b	100	1667	38.2	+44 49	8.97	9.97	Ko	1	..	37463i

## THE HENRY DRAPER CATALOGUE.

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7<sup>h</sup> 38<sup>m</sup>.2

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1998	38.2	+39 50	6.75	7.25	F8	8	..	37463i	51	2093	38.4	-16 49	6.65	7.43	G5	8	..	18976b
2	1675	38.2	+36 5	8.6	9.7	K2	2	..	37448i	52	2113	38.4	-17 27	9.1	9.7	Go	2	..	18976b
3	1853	38.2	+8 31	8.59	9.01	F5	3	..	37581i	53	1981	38.4	-18 10	9.2	9.3	A2	6	..	18288b
4	1771	38.2	+3 27	8.1	9.1	Ko	4	..	37580i	54	1982	38.4	-18 26	9.1	9.1	Ao	7	..	18288b
5	2028	38.2	-3 54	7.10	7.38	Fo	3	..	18560b	55	2088	38.4	-21 56	9.6	9.3	F8	1	..	44381b
6	2145	38.2	-7 27	9.8	9.8	Ao	1	..	20802b	56	1990	38.4	-22 42	10.5	9.6	F8	1	..	44433b
7	2175	38.2	-10 39	9.0	9.8	G5	1	..	44419b	57	5995	38.4	-23 12	10.7	9.3	A2	2	..	44433b
8	2100	38.2	-12 26	8.5	8.5	Ao	3	..	12673b	58	4429	38.4	-27 30	7.4	7.4	B9	7	1,3	20856b
9	1989	38.2	-22 10	9.8	9.3	Ao	1	..	44381b	59	4812	38.4	-30 0	8.05	7.7	B9	7	..	44428b
10	5987	38.2	-23 37	10.9	9.0	B9	3	..	44433b	60	4309	38.4	-32 43	9.2	8.5	B8	4	..	42909b
11	5815	38.2	-24 51	10.0	9.2	A2	1	..	44381b	61	2916	38.4	-50 53	8.2	9.7	K5	3	..	24589b
12	4806	38.2	-26 56	7.9	7.3	B8	5	..	20856b	62	1406	38.4	-53 17	8.9	9.2	B9	6	..	24589b
13	4730	38.2	-28 11	9.0	8.7	A5	3	..	44428b	63	757	38.4	-69 50	8.3	8.6	Fo	7	..	15274b
14	4729	38.2	-28 37	9.5	9.2	A5	3	..	44428b	64	458	38.4	-75 19	7.58	8.1	F8	10	..	20652b
15	4805	38.2	-29 57	6.86	6.8	B3	3	5,9	42934b	65	1801	38.5	+23 35	7.76	8.04	K5	2	..	37494i
16	4940	38.2	-31 50	7.01	7.2	Fo	9	..	42909b	66	1738	38.5	+14 25	7.59	8.04	Mb	4	..	37570i
17	3471	38.2	-43 24	7.26	6.7	Ao	3	0,2	42928b	67	2062	38.5	-4 26	6.97	6.95	B9	5	..	18560b
18	3655	38.2	-44 23	6.42	7.0	B9	6	..	42162b	68	2221	38.5	-5 16	9.4	9.5	A2	2	..	20802b
19	1660	38.3	+31 21	7.7	7.8	A5	6	..	37569i	69	2150	38.5	-7 12	8.9	10.1	K5	1	..	44419b
20	1889	38.3	+20 8	8.6	8.9	F	3	..	37570i	70	1995	38.5	-15 19	10.3	10.7	F5	2	..	24594b
21	1642	38.3	+15 30	7.4	7.7	Fo	7	..	37570i	71	2133	38.5	-20 14	8.55	8.9	Ao	4	..	18976b
22	1768	38.3	+6 31	8.1	8.1	B9	6	0,7-	37553i	72	2134	38.5	-20 23	9.0	9.8	G5	1	..	18976b
23	1773	38.3	+3 44	7.4	7.9	F8	6	..	37580i	73	5823	38.5	-24 15	9.0	8.6	A5	4	..	44381b
24	1772	38.3	+3 6	8.3	9.4	K2	2	..	12755b	74	4946	38.5	-31 30	8.9	8.5	B5	5	..	42909b
25	1814	38.3	-1 16	9.0	9.0	Ao	2	..	12772b	75	3566	38.5	-38 6	7.9	8.5	G5	4	..	18435b
26	2060	38.3	-4 56	9.30	9.30	Ao	3	..	20802b	76	3564	38.5	-38 18	6.24	6.7	B8	..	3,5	56,124
27	2254	38.3	-6 14	9.2	9.5	F2	2	..	20802b	77	1308	38.5	-55 25	7.3	7.5	Ao	10	..	24589b
28	2177	38.3	-10 32	8.9	9.9	Ko	3	..	44419b	78	1351	38.6	+51 16	7.06	8.24	K5	3	..	37344i
29	2166	38.3	-14 37	9.1	9.2	A2	4	..	24594b	79	1480	38.6	+45 50	8.4	8.8	F5	3	..	37463i
30	2111	38.3	-17 14	9.6	9.7	A2	4	..	24594b	80	1670	38.6	+44 32	8.5	9.3	G5	3	..	37463i
31	2131	38.3	-20 27	9.2	9.2	Ao	2	..	18976b	81	1757	38.6	+42 20	8.7	10.1	Ma	1	..	37463i
32	5991	38.3	-23 18	11.2	9.5	Ko	1	..	44433b	82	1723	38.6	+18 26	8.7	9.5	G5	2	..	37552i
33	4427	38.3	-27 42	9.0	8.0	Ao	3	..	20856b	83	1739	38.6	+14 15	8.4	8.5	A2	5	..	37570i
34	4953	38.3	-30 41	9.2	8.5	B8	4	..	42909b	84	1801	38.6	+4 24	8.7	9.2	F8	2	..	12755b
35	4952	38.3	-30 51	9.2	9.7	K2	2	..	44428b	85	1816	38.6	-1 7	7.9	9.0	K2	4	..	37580i
36	4944	38.3	-31 27	9.7	9.7	F8	3	0,2	44428b	86	2063	38.6	-4 28	6.83	7.61	G5	7	3,2	44419b
37	4305	38.3	-32 30	10.8	9.1	A	2	..	42909b	87	2222	38.6	-5 26	9.1	9.9	G5	1	..	20802b
38	958	38.3	-58 59	8.3	8.8	F8	3	..	12757b	88	2104	38.6	-12 9	9.0	9.0	Ao	2	..	12673b
39	789	38.3	-67 14	10.0	10.1	A3	2	..	15274b	89	2114	38.6	-17 14	10.2	10.8	Go	2	..	24594b
40	670	38.3	-70 7	..	11.4	Pec.	1	R	15274b	90	1984	38.6	-18 42	9.4	10.5	K2	2	..	24594b
41	524	38.4	+66 34	9.2	9.6	F5	2	..	37713i	91	2136	38.6	-20 56	9.4	9.8	B3	2	..	44433b
42	1732	38.4	+43 15	8.0	8.8	G5	4	..	37463i	92	2090	38.6	-21 31	9.1	8.4	Ao	3	..	18301b
43	1615	38.4	+32 34	8.4	8.7	Fo	5	..	37569i	93	2091	38.6	-21 45	6.93	7.8	Ko	6	..	18301b
44	1464	38.4	+27 43	8.5	9.5	Ko	2	..	37569i	94	1991	38.6	-22 30	9.2	9.5	K2	2	..	44381b
45	1759	38.4	+24 38	3.68	4.46	G5	..	0,R	1710c	95	4823	38.6	-26 40	9.0	9.0	F2	1	..	20856b
46	1890	38.4	+20 27	7.32	8.10	G5	5	..	37570i	96	4433	38.6	-27 46	9.5	8.9	A2	3	..	44428b
47	1753	38.4	+9 51	7.82	7.88	A2	6	0,5	37553i	97	4815	38.6	-29 43	10.4	9.2	A2	1	..	44428b
48	2061	38.4	-5 4	9.00	9.00	Ao	3	..	20802b	98	4312	38.6	-32 28	9.3	9.1	F2	2	..	42909b
49	2148	38.4	-7 59	9.0	9.5	F8	3	2,2	44418b	99	3386	38.6	-45 5	9.30	9.4	B9	4	..	20787b
50	2171	38.4	-14 46	8.9	9.5	Go	4	..	24594b	100	1348	38.6	-54 29	6.80	7.4	A5	3	..	42171b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

62400

7<sup>h</sup> 38<sup>m</sup>.6

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	865	38.6	-61 27	8.9	9.7	Ko	2	..	12757b	51	1250	38.9	-52 6	9.4	9.5	A2	3	..	24589b
2	791	38.6	-68 2	7.9	8.0	A2	4	..	8913b	52	1221	39.0	+55 49	8.1	9.5	Ma	3	..	3556ri
3	758	38.6	-69 5	8.6	8.9	F2	5	..	15274b	53	1220	39.0	+55 44	8.2	9.2	Ko	5	..	3556ri
4	671	38.6	-70 39	9.8	10.4	G	1	..	15168b	54	2001	39.0	+39 47	7.07	7.35	Fo	7	..	37463i
5	1758	38.7	+42 47	9.0	10.0	K	1	..	37463i	55	1668	39.0	+34 20	8.5	9.5	Ko	2	..	37448i
6	1724	38.7	+18 50	8.5	8.5	Ao	4	..	3757oi	56	1667	39.0	+34 4	8.8	9.9	K2	1	..	37448i
7	1750	38.7	+13 7	6.50	7.50	Ko	4	0.8	37553i	57	1805	39.0	+23 15	7.52	8.52	Ko	3	..	37494i
8	2223	38.7	-6 4	8.9	10.1	K5	1	..	20802b	58	1727	39.0	+18 3	8.5	9.6	K2	1	..	37552i
9	2178	38.7	-14 36	8.7	8.8	A3	4	..	24594b	59	1657	39.0	+17 14	8.1	8.1	B9	5	..	3757oi
10	2096	38.7	-17 0	9.6	9.6	Ao	2	..	18976b	60	2225	39.0	-5 26	8.5	9.6	K2	3	..	20802b
11	6003	38.7	-23 44	11.2	10.7	Ao	2	..	44433b	61	2226	39.0	-5 54	9.6	11.0	Ma	..	..	M
12	4824	38.7	-26 7	5.78	6.7	Ko	..	0.9	28,200	62	2227	39.0	-5 57	9.6	9.7	A2	2	..	20802b
13	4438	38.7	-27 11	10.4	9.7	B	1	..	44428b	63	2261	39.0	-6 28	8.5	8.6	A3	7	0.3	20802b
14	3796	38.7	-35 54	7.9	8.1	Ao	6	..	42915b	64	2259	39.0	-6 49	9.2	9.3	A3	3	..	44418b
15	3569	38.7	-38 18	8.6	8.2	A5	5	..	18435b	65	2260	39.0	-7 2	8.1	9.1	Ko	4	..	20802b
16	3339	38.7	-41 3	9.0	9.1	Fo	2	..	20785b	66	2001	39.0	-15 38	10.2	10.2	A	2	..	24594b
17	2992	38.7	-49 51	10.2	9.7	Ao	2	..	24589b	67	2100	39.0	-16 7	10.2	10.5	F2	2	..	24594b
18	792	38.7	-67 13	9.1	9.9	G5	3	..	15274b	68	2099	39.0	-17 5	9.6	9.7	A2	2	..	18976b
19	1733	38.8	+43 26	8.6	9.6	Ko	1	..	37463i	69	2093	39.0	-22 4	7.7	8.0	G5	7	..	18301b
20	1761	38.8	+22 42	8.0	9.0	Ko	1	..	37494i	70	R	39.0	-22 18	10.9	9.8	B9	2	..	44433b
21	1775	38.8	+3 4	9.0	9.1	A5	4	5.2	12755b	71	1995	39.0	-22 54	9.1	9.2	Fo	3	..	44381b
22	2064	38.8	-4 22	8.6	8.7	A3	5	..	44419b	72	6010	39.0	-23 20	11.6	9.5	Ao	1	..	44433b
23	2191	38.8	-9 54	7.64	8.71	K2	5	2.2	20802b	73	5836	39.0	-24 21	10.4	9.0	Ao	3	..	44381b
24	2184	38.8	-10 43	9.8	9.8	Ao	3	..	44419b	74	4838	39.0	-26 55	9.5	9.7	K2	1	..	44428b
25	2116	38.8	-17 57	9.8	10.6	G5	2	..	24594b	75	4446	39.0	-27 26	6.92	7.0	A3	4	0.8	42934b
26	2115	38.8	-18 0	9.6	9.6	Ao	3	..	24594b	76	4958	39.0	-31 25	9.0	9.4	Ko	2	..	42909b
27	4948	38.8	-25 3	10.0	9.2	Ao	3	..	44433b	77	4320	39.0	-32 59	8.3	9.1	Ko	1	..	42909b
28	4946	38.8	-25 35	7.9	7.4	A2	2	4.6	8911b	78	3827	39.0	-34 55	9.45	9.6	F2	1	..	18435b
29	4823	38.8	-29 16	10.0	8.6	B9	4	..	44428b	79	3806	39.0	-37 52	9.2	9.4	A3	3	..	18435b
30	4969	38.8	-30 59	10.2	9.7	B9	3	..	44428b	80	3574	39.0	-38 30	8.6	9.1	Ko	2	..	18435b
31	4060	38.8	-33 32	8.9	8.9	Go	2	..	42909b	81	3488	39.0	-44 1	9.8	9.3	Ao	2	..	20786b
32	3359	38.8	-46 40	8.8	8.5	Fo	4	..	20786b	82	2921	39.0	-50 47	10.0	10.0	Ao	2	..	24589b
33	1249	38.8	-52 5	9.1	9.4	A2	5	..	24589b	83	1251	39.0	-52 57	8.0	7.9	B2	9	..	24589b
34	257	38.9	+81 36	7.13	8.20	K2	5	..	37546i	84	1349	39.0	-54 42	9.9	10.3	F5	2	..	24589b
35	1763	38.9	+24 34	8.7	9.3	Go	2	..	37503i	85	963	39.0	-58 38	7.3	7.8	B8	6	..	12757b
36	1656	38.9	+17 44	8.3	8.4	A2	3	..	3757oi	86	143	39.0	-84 21	9.4	9.7	F2	2	..	22238b
37	1761	38.9	+2 39	6.34	6.62	Fo	8	..	3758oi	87	1813	39.1	+37 54	8.8	9.4	Go	3	..	37448i
38	1762	38.9	+2 16	9.0	9.1	A2	2	..	3758oi	88	1669	39.1	+34 48	7.97	8.05	A3	6	..	37569i
39	1999	38.9	-15 28	10.3	10.3	A	1	..	24594b	89	1764	39.1	+24 23	8.8	8.9	A2	2	..	37503i
40	2098	38.9	-16 28	10.1	10.1	Ao	3	..	24594b	90	1765	39.1	+5 12	9.7	9.8	A2	2	..	12755b
41	2117	38.9	-18 3	10.1	10.7	Go	2	..	24594b	91	1893	39.1	+1 20	9.0	9.1	A3	2	..	12755b
42	1987	38.9	-18 9	10.1	10.2	A2	2	..	24594b	92	1823	39.1	-1 27	9.7	9.7	A	1	..	12772b
43	1993	38.9	-22 8	10.1	9.8	A	3	..	44433b	93	2186	39.1	-10 32	9.1	10.3	K5	1	..	44419b
44	1994	38.9	-22 58	9.1	9.5	K5	1	..	44381b	94	2118	39.1	-17 19	8.1	8.1	B9	6	..	18976b
45	4750	38.9	-28 30	9.0	8.3	B9	4	..	20856b	95	2142	39.1	-20 36	9.2	9.8	Fo	3	..	44433b
46	3798	38.9	-36 1	9.2	9.3	Ao	3	..	42915b	96	2094	39.1	-21 53	8.5	8.1	Ao	4	..	18301b
47	3820	38.9	-36 9	7.8	7.8	B8	8	..	42915b	97	1997	39.1	-22 12	9.6	9.5	F5	3	..	44433b
48	3436	38.9	-42 41	9.4	9.6	G5	1	..	20785b	98	5840	39.1	-24 21	8.7	8.9	Ko	3	..	44381b
49	3392	38.9	-45 49	10.0	9.9	A2	2	..	20786b	99	4957	39.1	-25 32	11.2	9.5	Ao	1	..	44433b
50	2632	38.9	-52 0	10.2	10.0	A	2	..	24589b	100	4753	39.1	-28 13	10.9	9.2	B8	2	..	44428b



## THE HENRY DRAPER CATALOGUE.

62500

7<sup>h</sup> 39<sup>m</sup>.1

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	4752	39.1	m. -28 49	9.7	9.2	Ko	1	..	44428b	51	2184	39.4	m. -14 52	9.2	9.3	A5	3	..	24594b
2	4975	39.1	-30 48	9.5	8.6	B8	3	..	42909b	52	1989	39.4	-18 41	8.9	9.7	G5	3	..	18976b
3	3575	39.1	-38 58	7.03	7.0	B9	6	1,9	42928b	53	2096	39.4	-21 55	8.1	7.3	Ao	7	..	18301b
4	3298	39.1	-41 29	8.3	8.7	A5	6	..	20785b	54	1998	39.4	-22 17	10.2	9.6	A2	2	..	44433b
5	3439	39.1	-42 23	9.1	8.1	B9	4	..	20785b	55	4966	39.4	-25 16	6.66	6.9	A3	6	0,7	8911b
6	3362	39.1	-46 25	8.4	8.4	G5	4	..	20786b	56	4850	39.4	-26 56	8.1	7.4	Ao	5	..	20856b
7	1253	39.1	-52 29	9.8	10.6	G5	1	..	24589b	57	4763	39.4	-28 11	10.4	8.9	Fo	2	..	20856b
8	316	39.2	+75 29	9.07	9.13	A2	3	..	37559i	58	4846	39.4	-29 7	7.8	8.5	Go	5	..	44428b
9	1463	39.2	+28 16	1.21	2.21	Ko	..	R	28,200	59	3580	39.4	-38 40	7.9	7.6	Fo	3	..	42928b
10	1893	39.2	+20 33	6.28	6.28	Ao	8	2,9	37494i	60	3445	39.4	-42 19	7.3	7.4	B8	4	0,9	42928b
11	1894	39.2	+1 11	9.0	9.4	F5	3	..	12755b	61	3667	39.4	-44 29	9.8	9.4	Ao	2	..	20786b
12	1799	39.2	-0 31	9.0	9.0	Ao	3	..	12772b	62	3669	39.4	-44 48	9.1	8.7	Ao	3	..	20786b
13	2263	39.2	-3 0	7.9	8.4	F8	3	..	12774b	63	738	39.4	-64 15	8.9	9.3	F5	5	..	15274b
14	2229	39.2	-5 37	9.1	10.3	K5	2	..	44418b	64	1238	39.5	+56 20	8.2	9.2	Ko	1	..	37409i
15	2187	39.2	-10 50	8.9	9.2	F2	3	..	44419b	65	1309	39.5	+46 21	8.6	9.7	K2	2	..	37463i
16	4960	39.2	-25 31	10.0	9.5	Ko	1	..	44433b	66	1662	39.5	+31 49	9.4	9.4	Ao	1	..	37448i
17	4837	39.2	-29 18	8.3	8.5	F5	5	..	44428b	67	1638	39.5	+26 14	8.2	9.2	Ko	4	E	37503i
18	4963	39.2	-31 7	10.9	9.4	A2	2	..	44428b	68	1677	39.5	+21 6	8.4	8.4	Ao	4	..	37503i
19	4961	39.2	-31 39	10.0	8.6	F8	3	..	42909b	69	1773	39.5	+6 30	8.3	9.1	G5	1	..	37581i
20	3832	39.2	-34 37	8.3	9.3	F2	3	..	42915b	70	2230	39.5	-5 8	8.50	8.56	A2	5	..	20802b
21	3666	39.2	-44 22	9.0	9.6	G5	1	..	20786b	71	2263	39.5	-6 27	9.1	9.4	Fo	4	..	20802b
22	1082	39.3	+60 33	6.86	7.28	F5	6	..	37676i	72	1993	39.5	-18 21	9.1	9.1	Ao	5	..	18976b
23	1549	39.3	+16 8	7.7	7.7	Ao	6	..	37570i	73	2033	39.5	-20 2	9.6	9.5	F8	2	..	44433b
24	1772	39.3	+6 15	9.2	9.2	A	2	..	37581i	74	4853	39.5	-26 38	9.3	9.2	Ko	2	..	44428b
25	1778	39.3	+3 44	8.5	9.3	G5	3	..	37580i	75	4855	39.5	-26 59	8.0	8.4	Ko	3	..	20856b
26	2061	39.3	+0 23	8.7	8.7	Ao	3	..	37580i	76	4767	39.5	-28 10	4.82	7.5	K5	..	0,6-	28,200
27	2067	39.3	-4 16	8.5	9.3	G5	3	..	44419b	77	4069	39.5	-33 34	7.44	7.9	Ao	7	..	42909b
28	2157	39.3	-7 41	9.0	9.8	G5	1	0,1	44419b	78	3809	39.5	-35 49	5.60	5.55	B8	..	..	56,124
29	2190	39.3	-11 4	8.3	9.1	G5	2	..	12673b	79	3448	39.5	-42 30	8.9	7.9	Ao	4	..	20785b
30	2006	39.3	-15 56	7.5	7.5	B9	7	..	18976b	80	3400	39.5	-45 27	9.1	7.9	Ao	6	..	20786b
31	2004	39.3	-16 1	9.2	9.3	A3	3	..	24594b	81	3135	39.5	-48 27	9.0	9.7	Ko	1	..	20786b
32	2120	39.3	-17 42	8.6	8.4	B3	4	..	18288b	82	2928	39.5	-50 9	9.74	9.2	Ao	3	..	24589b
33	2121	39.3	-17 46	9.8	9.9	A2	3	..	24594b	83	870	39.5	-61 45	8.0	8.8	Fo	4	5,2	18486b
34	2031	39.3	-19 41	9.2	9.8	Ko	1	..	18976b	84	439	39.6	+69 8	8.6	9.4	G5	3	..	37713i
35	2145	39.3	-21 2	7.9	8.1	Ao	6	0,7	18301b	85	651	39.6	+64 37	8.00	8.34	F2	3	..	37676i
36	4963	39.3	-25 31	11.2	9.7	Ao	1	..	44433b	86	1239	39.6	+56 13	8.7	9.5	G5	1	..	37409i
37	4981	39.3	-30 27	9.7	9.2	Ao	2	..	44428b	87	2199	39.6	-9 19	7.9	8.0	A2	6	2,3	20802b
38	4966	39.3	-31 30	10.0	9.2	Go	1	..	42909b	88	2200	39.6	-10 1	9.11	9.25	A5	3	..	44419b
39	4064	39.3	-33 4	7.8	7.9	Fo	7	..	42909b	89	2101	39.6	-16 41	8.1	8.0	B5	7	..	18976b
40	3805	39.3	-35 20	9.3	9.3	Ao	4	..	42915b	90	2124	39.6	-17 48	10.5	10.5	A	1	..	24594b
41	3348	39.3	-40 23	8.9	8.7	B8	4	..	18435b	91	2123	39.6	-18 6	10.1	10.1	Ao	2	..	24594b
42	3304	39.3	-41 59	7.5	8.1	B5	6	..	20785b	92	2034	39.6	-19 19	9.2	9.3	Ao	2	..	18976b
43	1350	39.3	-54 7	9.8	10.3	F8	1	..	24589b	93	1999	39.6	-22 40	10.1	9.3	Ao	2	..	44381b
44	1313	39.3	-55 43	9.5	10.3	G5	1	..	24589b	94	5857	39.6	-24 25	9.7	8.9	B9	3	..	44381b
45	1307	39.4	+46 10	9.0	9.3	Fo	3	..	37463i	95	3583	39.6	-38 38	6.73	7.9	G5	3	..	42928b
46	1814	39.4	+38 29	9.4	9.5	A3	2	..	37448i	96	1353	39.6	-54 32	9.1	10.3	K5	2	..	24589b
47	1677	39.4	+36 13	8.2	9.2	Ko	2	..	37448i	97	873	39.6	-59 46	7.87	7.8	Ao	8	0,3	15516b
48	1860	39.4	+8 49	8.3	8.7	F5	2	..	37581i	98	739	39.6	-64 5	8.5	9.9	Ma	1	..	15274b
49	2069	39.4	-4 49	7.9	8.5	Go	7	..	20802b	99	1468	39.7	+50 21	8.8	9.8	Ko	1	..	37344i
50	2191	39.4	-10 30	8.7	8.7	Ao	4	..	44419b	100	1744	39.7	+14 50	8.24	8.24	Ao	5	..	37570i



## ANNALS OF HARVARD COLLEGE OBSERVATORY.

62600

7h 39m.7

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1758	m. 39.7	° 9 16	9.0	9.8	G5	1	..	37581i	51	2163	m. 40.0	° - 7 43	9.2	9.3	A5	2	0,2-	44418b
2	1807	39.7	+ 4 40	8.85	8.85	Ao	4	..	12755b	52	2049	40.0	- 8 9	8.5	9.7	K5	1	3,1	20802b
3	1765	39.7	+ 2 52	8.7	9.7	Ko	1	..	12755b	53	2010	40.0	-15 44	8.5	9.7	K5	3	..	24594b
4	2266	39.7	- 7 3	8.3	8.9	Go	4	..	20802b	54	2102	40.0	-21 30	9.6	9.5	B8	3	..	44433b
5	2149	39.7	-20 48	8.6	9.3	F5	2	..	18976b	55	2103	40.0	-21 34	9.1	8.7	Ao	4	..	44381b
6	6045	39.7	-23 22	10.9	9.3	Ao	1	..	44381b	56	5873	40.0	-24 32	10.2	8.9	B9	1	..	44381b
7	4972	39.7	-25 3	11.8	9.0	Ao	1	..	44381b	57	4865	40.0	-26 7	10.0	9.2	F2	3	..	44428b
8	3519	39.7	-39 43	9.3	9.3	Go	2	..	18435b	58	4981	40.0	-31 53	9.7	8.8	B9	3	..	42909b
9	3363	39.7	-40 51	8.3	9.6	K5	1	..	20785b	59	3832	40.0	-36 52	8.3	8.5	B8	5	..	18435b
10	3367	39.7	-46 39	10.0	9.3	B9	2	..	20786b	60	3816	40.0	-37 54	8.6	8.8	G5	3	..	18435b
11	1355	39.7	-54 11	8.2	8.5	B8	7	..	24589b	61	3313	40.0	-41 49	9.3	8.7	Fo	2	..	20785b
12	1404	39.7	-56 4	6.7	7.2	B8	4	..	42171b	62	3139	40.0	-48 55	8.6	9.1	F5	4	..	20786b
13	238	39.8	+80 31	6.47	7.25	G5	..	0,6-	56,84	63	1356	40.0	-54 57	6.92	7.4	B8	4	..	42171b
14	1483	39.8	+45 3	9.42	9.50	A3	2	..	37463i	64	774	40.0	-63 8	8.4	9.5	K2	4	..	18486b
15	1470	39.8	+26 58	8.0	8.0	B8	5	3,7	10754i	65	251	40.0	-79 4	9.3	10.3	Ko	4	..	20652b
16	1745	39.8	+14 4	9.0	9.8	G5	2	..	37570i	66	163	40.1	+84 11	9.2	10.0	G5	2	..	37546i
17	2126	39.8	-17 37	8.1	8.1	Ao	7	..	18976b	67	1108	40.1	+59 20	8.0	8.3	Fo	5	..	37676i
18	2127	39.8	-17 57	10.7	11.5	G5	2	..	24594b	68	1484	40.1	+47 36	7.65	8.65	Ko	4	..	37344i
19	2001	39.8	-22 33	9.4	9.2	A5	1	..	44381b	69	1763	40.1	+42 12	9.0	9.8	G5	1	..	37463i
20	6051	39.8	-23 54	9.7	8.7	B9	2	..	44381b	70	1747	40.1	+14 32	9.0	9.6	G	2	..	37570i
21	6053	39.8	-23 59	9.5	9.3	K2	1	..	44433b	71	1863	40.1	+ 7 59	7.8	8.8	Ko	2	0,1	37581i
22	4975	39.8	-25 24	9.7	9.3	G5	1	..	44433b	72	1809	40.1	+ 4 7	8.7	9.3	Go	4	..	12755b
23	4774	39.8	-28 43	4.10	4.16	A2p	..	3R	28,200	73	2269	40.1	- 6 11	8.5	9.5	Ko	3	..	20802b
24	4992	39.8	-30 13	9.5	9.2	B9	2	..	44428b	74	2164	40.1	- 7 29	8.5	8.5	Ao	4	0,2	20802b
25	3452	39.8	-43 1	9.1	8.5	B9	3	..	20785b	75	2011	40.1	-15 32	9.2	9.5	Fo	3	..	24594b
26	1257	39.8	-52 32	8.9	9.4	F8	4	..	24589b	76	2105	40.1	-17 2	8.0	8.4	F5	5	..	18976b
27	1484	39.9	+45 30	8.6	9.7	K2	2	..	37463i	77	1999	40.1	-19 1	9.1	9.2	A2	3	..	18976b
28	1815	39.9	+38 31	8.4	9.4	Ko	3	..	37448i	78	2104	40.1	-21 15	10.5	9.8	B5	3	..	44433b
29	1768	39.9	+ 2 42	8.7	8.8	A5	2	..	37580i	79	6064	40.1	-23 38	8.9	9.0	K	4	..	44433b
30	2231	39.9	- 5 18	8.9	10.1	K5	1	..	20802b	80	4984	40.1	-25 28	8.7	8.3	Ao	4	..	44381b
31	2162	39.9	- 7 13	10.1	10.1	Ao	1	..	44418b	81	4982	40.1	-25 34	10.0	8.9	A	3	..	44433b
32	2086	39.9	-12 4	8.7	8.8	A2	3	..	12673b	82	4869	40.1	-26 28	9.0	8.3	B8	4	..	20856b
33	2128	39.9	-17 55	9.4	10.0	Go	4	..	24594b	83	4470	40.1	-27 29	8.9	8.7	G5	2	..	20856b
34	2036	39.9	-19 37	9.2	9.6	A2	2	..	18976b	84	5007	40.1	-30 16	9.7	9.2	F2	1	..	44428b
35	2037	39.9	-20 4	9.8	9.8	A3	2	..	44433b	85	5002	40.1	-30 37	10.4	9.7	G5	1	..	44428b
36	2100	39.9	-21 7	9.4	9.8	Ko	1	..	44433b	86	3817	40.1	-35 59	7.9	8.8	K2	4	..	42915b
37	5870	39.9	-24 41	8.7	8.6	Go	3	..	44381b	87	877	40.1	-60 3	8.81	9.9	A2	4	..	15516b
38	4977	39.9	-25 58	10.7	9.3	Ao	1	..	44428b	88	673	40.1	-70 13	9.28	8.6	B9	7	..	15274b
39	4863	39.9	-27 1	9.3	8.9	B9	4	..	44428b	89	321	40.1	-77 25	6.48	8.5	K2	9	..	20652b
40	4777	39.9	-28 11	8.5	8.0	B9	6	..	20856b	90	269	40.1	-78 47	9.4	9.7	F2	5	..	20652b
41	3831	39.9	-36 27	7.5	9.3	K5	2	..	42915b	91	118	40.1	-86 3	9.0	9.4	F5	4	..	15145b
42	3815	39.9	-37 30	8.0	7.3	Ao	7	..	42909b	92	258	40.2	+78 59	8.9	9.3	F5	2	..	37493i
43	3522	39.9	-39 54	9.20	9.3	A3	2	..	18435b	93	1487	40.2	+45 51	8.8	9.8	K	1	..	37463i
44	3675	39.9	-44 55	5.22	6.0	G5	..	0,8	56,124	94	1486	40.2	+44 54	9.07	9.85	G5	1	..	37463i
45	1316	39.9	-55 17	8.7	8.9	A3	4	..	24589b	95	1808	40.2	+23 48	7.46	7.44	B9	6	..	37503i
46	619	39.9	-72 57	9.0	10.0	Ko	2	..	15168b	96	1619	40.2	+10 6	8.32	8.38	A2	3	..	37553i
47	1769	40.0	+37 46	5.45	6.80	Ma	9	0,9R	37448i	97	1808	40.2	- 0 11	7.58	7.58	Ao	7	..	37580i
48	1664	40.0	+11 59	8.4	8.4	Ao	3	..	20709b	98	2044	40.2	- 3 25	8.7	8.8	A2	3	..	12774b
49	1862	40.0	+ 8 1	8.5	8.5	Ao	2	..	20709b	99	2075	40.2	- 4 13	6.93	8.11	K5	2	..	18560b
50	2268	40.0	- 6 40	9.1	9.2	A5	4	..	44418b	100	2166	40.2	- 7 42	8.5	8.5	B8	5	1,3-	44418b

## THE HENRY DRAPER CATALOGUE.

62700

7<sup>h</sup> 40<sup>m</sup>.2

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	2196	m. 40.2	° 10 31	8.7	8.7	Ao	1	..	12673b	51	4344	m. 40.4	° 32 14	8.4	9.1	G5	4	..	42909b
2	2130	40.2	17 27	7.7	8.7	Ko	3	..	18976b	52	3531	40.4	39 39	8.3	7.2	B9	7	1,3	18435b
3	2038	40.2	20 5	9.8	9.8	Ao	1	..	44433b	53	3379	40.4	40 5	6.66	6.5	B2	7	R	42928b
4	2152	40.2	20 46	9.2	10.1	K5	1	..	44433b	54	3375	40.4	46 9	10.0	9.9	Go	1	..	20786b
5	5878	40.2	24 6	11.2	9.5	A2	1	..	44433b	55	3376	40.4	46 49	8.3	7.6	B5	7	..	20786b
6	4985	40.2	25 42	10.7	9.5	B9	1	..	44433b	56	3014	40.4	49 46	6.58	6.9	Ao	8	..	8952b
7	4782	40.2	28 38	8.7	8.3	F2	5	..	44428b	57	1359	40.4	54 36	9.8	10.3	F8	1	..	24589b
8	4865	40.2	29 20	9.3	9.9	K2	1	..	44428b	58	967	40.4	58 24	6.44	6.3	B8	4	3,9	42171b
9	4863	40.2	29 43	9.7	9.4	G5	1	..	44428b	59	778	40.4	64 1	9.5	9.5	Ao	5	..	15274b
10	5010	40.2	30 59	7.9	8.6	G5	4	..	42909b	60	796	40.4	68 2	9.1	10.1	Ko	2	..	15274b
11	4984	40.2	31 6	7.5	8.6	G5	5	..	42909b	61	763	40.4	69 14	9.1	9.2	A5	5	..	15274b
12	3820	40.2	37 58	6.44	6.5	B5	..	3,6	28,200	62	461	40.4	76 37	10.4	10.4	Ao	3	..	20652b
13	3377	40.2	40 42	5.11	7.1	Ko	..	0,8	56,124	63	116	40.4	87 33	9.3	9.4	A5	3	..	22238b
14	1319	40.2	55 55	6.7	7.7	B9	3	..	42171b	64	1572	40.5	+48 40	8.9	9.9	Ko	1	..	37344i
15	868	40.2	62 8	8.2	9.4	K5	1	..	15516b	65	1679	40.5	+35 12	7.52	7.58	A2	7	..	37569i
16	867	40.2	62 30	8.3	9.3	Ko	1	..	15516b	66	1662	40.5	+17 16	7.8	8.2	F5	3	..	37570i
17	..	40.2	77 35	..	..	K	1	..	20652b	67	1551	40.5	+16 41	7.4	8.4	Ko	2	..	37570i
18	440	40.3	+69 14	9.0	9.0	Ao	4	..	37713i	68	1771	40.5	+ 2 2	9.4	9.5	A2	2	..	37580i
19	1764	40.3	+42 18	8.6	9.6	Ko	1	..	37463i	69	2273	40.5	- 6 41	9.4	9.8	F5	2	..	44419b
20	1679	40.3	+21 22	7.47	7.81	F2	6	..	37503i	70	2052	40.5	- 8 46	9.1	9.7	Go	3	..	44419b
21	1733	40.3	+18 45	5.02	6.09	K2	9	R	37570i	71	2201	40.5	-10 37	8.7	9.9	K5	2	..	44419b
22	1732	40.3	+18 25	8.3	8.4	A2	4	..	37570i	72	2132	40.5	-17 6	10.1	10.1	Ao	1	..	18976b
23	1620	40.3	+10 38	8.3	9.1	G5	4	0,3	37581i	73	2133	40.5	-17 29	8.9	10.3	Mb	2	..	24594b
24	1809	40.3	- 0 15	7.68	8.02	F2	5	..	37580i	74	R	40.5	-22 34	11.4	9.8	B9	2	..	44433b
25	2205	40.3	-10 3	8.61	8.75	A5	2	..	12673b	75	6092	40.5	-24 0	8.9	8.0	Ao	5	..	44381b
26	2088	40.3	-11 31	8.1	8.1	B8	4	..	12673b	76	5888	40.5	-24 10	9.5	9.7	G5	2	..	44433b
27	2204	40.3	-13 27	8.0	8.0	Ao	4	..	12673b	77	5887	40.5	-24 19	9.3	8.9	A2	4	..	44433b
28	2190	40.3	-14 50	7.9	8.2	F2	4	..	12673b	78	4884	40.5	-26 23	10.0	10.4	Fo	3	..	44428b
29	2014	40.3	-15 52	8.0	7.9	B5	6	..	18976b	79	4883	40.5	-26 32	10.2	9.2	Ko	2	..	44428b
30	2153	40.3	-20 13	9.20	10.1	K5	1	..	44433b	80	4881	40.5	-26 43	9.7	9.0	B	4	..	44428b
31	2004	40.3	-22 37	9.8	9.8	Ko	2	..	44433b	81	3825	40.5	-35 50	5.83	6.5	A5	..	..	56,124
32	6079	40.3	-23 14	10.7	9.0	A2	2	..	44381b	82	3827	40.5	-37 54	8.9	9.9	G5	2	..	18435b
33	6081	40.3	-23 38	11.2	9.0	B9	4	..	44433b	83	3411	40.5	-45 38	7.5	8.5	K5	4	..	20786b
34	5884	40.3	-24 49	9.7	8.9	Ao	1	..	44381b	84	459	40.5	-75 12	9.6	10.8	K5	1	..	20652b
35	4987	40.3	-31 27	7.44	8.2	Fo	8	..	42909b	85	144	40.5	-84 8	8.7	9.9	K5	2	..	22238b
36	4086	40.3	-33 11	8.6	8.2	B9	5	..	42909b	86	1748	40.6	+13 58	8.2	8.3	A2	5	..	37570i
37	3826	40.3	-37 29	8.1	7.8	B8	6	..	42909b	87	1812	40.6	+ 4 32	8.1	9.2	K2	2	..	12755b
38	3320	40.3	-41 9	8.6	8.5	B8	4	..	20785b	88	2171	40.6	- 7 21	9.0	9.0	B8	2	..	20802b
39	3318	40.3	-41 14	7.1	8.7	K5	4	..	20785b	89	2054	40.6	- 8 17	9.1	9.2	A5	3	..	44419b
40	3511	40.3	-43 18	10.5	10.9	Ma	..	..	M	90	2055	40.6	- 8 36	8.5	8.8	Fo	5	5,3	20802b
41	1413	40.3	-53 33	9.7	10.5	G5	1	..	24589b	91	2001	40.6	-19 5	9.6	9.3	Ao	3	0,2	44433b
42	1829	40.4	- 1 24	9.0	9.0	A	1	..	12772b	92	2042	40.6	-19 26	9.1	9.3	Ko	3	0,2	24594b
43	2234	40.4	- 5 22	9.8	9.8	Ao	2	..	20802b	93	2157	40.6	-20 28	9.4	9.6	Ao	2	..	44433b
44	2198	40.4	-10 34	8.1	8.5	F5	3	0,2	12673b	94	2156	40.6	-20 49	8.7	8.9	Ao	2	..	18976b
45	2015	40.4	-15 27	8.7	10.1	Ma	2	..	24594b	95	4994	40.6	-25 59	10.9	9.7	Ao	1	..	44433b
46	2017	40.4	-16 3	8.9	8.9	Ao	3	..	18976b	96	4482	40.6	-27 22	11.2	9.2	B9	1	..	44428b
47	5885	40.4	-24 26	5.53	5.9	B3	..	2,9	28,200	97	4874	40.6	-30 1	9.5	9.7	F2	1	..	44428b
48	4477	40.4	-27 49	10.2	8.6	Ao	1	..	20856b	98	5018	40.6	-30 9	10.2	9.4	A3	2	..	44428b
49	4866	40.4	-30 1	7.70	8.9	Ao	2	..	44428b	99	5019	40.6	-30 40	10.2	9.2	Ao	1	..	44428b
50	4868	40.4	-30 1	7.6	7.6	Ao	3	1,8	42934b	100	4993	40.6	-31 29	10.4	8.8	A5	3	..	42909b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

62800

7<sup>h</sup> 40<sup>m</sup>.6

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	3841	40.6	-36 56	9.3	10.5	K5	1	..	18435b	51	764	40.8	-69 37	7.9	8.9	Ko	8	..	15274b
2	3830	40.6	-37 45	9.9	9.6	Ao	3	..	18435b	52	145	40.8	-84 39	9.4	10.4	K	1	..	22238b
3	3598	40.6	-38 35	7.5	7.4	B9	5	..	42928b	53	1472	40.9	+49 58	7.42	8.42	Ko	5	..	37344i
4	3324	40.6	-41 37	8.9	8.5	B9	4	..	20785b	54	1673	40.9	+49 37	7.77	8.19	F5	6	..	37344i
5	969	40.6	-58 26	6.7	7.7	B9	8	..	12757b	55	1676	40.9	+34 24	8.4	9.4	Ko	2	..	37569i
6	229	40.6	-82 2	8.8	9.1	F2	3	..	20869b	56	1584	40.9	+33 50	8.0	8.8	G5	4	..	37569i
7	259	40.7	+79 47	7.83	8.83	Ko	3	..	37493i	57	1647	40.9	+26 16	8.8	9.4	G	2	E	37503i
8	1105	40.7	+57 2	8.0	8.8	G5	4	..	37676i	58	1666	40.9	+16 54	7.5	7.5	Ao	5	..	37570i
9	1674	40.7	+44 32	8.8	10.0	K5	1	..	37463i	59	1865	40.9	+7 54	8.4	9.4	Ko	1	..	37581i
10	1778	40.7	+5 20	8.1	8.7	Go	3	..	12755b	60	1813	40.9	+3 55	8.3	9.1	G5	2	..	37580i
11	1772	40.7	+2 49	8.1	8.1	Ao	5	..	37580i	61	1901	40.9	+1 41	9.0	9.0	Ao	4	..	12755b
12	1813	40.7	-0 56	9.4	9.5	A2	2	..	12774b	62	2277	40.9	-6 59	9.1	10.2	K2	2	..	44418b
13	2274	40.7	-6 32	9.2	9.3	A2	2	..	44419b	63	2193	40.9	-14 27	6.80	6.80	Ao	8	R	2399b
14	2172	40.7	-7 37	9.1	9.1	Ao	2	2,1	20802b	64	2194	40.9	-14 27	6.06	6.06	Ao	8	R	2399b
15	2206	40.7	-9 34	10.2	10.2	Ao	1	..	44419b	65	2003	40.9	-18 27	8.9	9.0	A2	5	..	18976b
16	2207	40.7	-9 55	7.61	8.11	F8	5	3,4	12673b	66	2159	40.9	-20 34	8.5	8.9	B	2	R	18976b
17	2106	40.7	-21 13	9.4	10.3	K5	2	..	44433b	67	2107	40.9	-21 59	8.1	8.6	G5	4	..	44381b
18	2005	40.7	-22 36	10.1	9.8	B9	2	..	44433b	68	2008	40.9	-22 20	8.7	9.5	Ko	2	..	44381b
19	6104	40.7	-23 26	10.7	9.3	B9	2	..	44433b	69	5000	40.9	-25 7	11.4	9.5	B5	2	..	44433b
20	6105	40.7	-23 50	10.4	9.0	Ao	3	..	44433b	70	5001	40.9	-25 20	10.7	9.2	A2	1	..	44381b
21	5898	40.7	-24 46	10.9	8.9	B9	1	..	44381b	71	4999	40.9	-25 22	10.7	9.0	Ao	2	..	44381b
22	4347	40.7	-32 27	9.7	8.8	Ao	2	..	42909b	72	5027	40.9	-30 23	9.5	9.2	Ao	2	..	44428b
23	3830	40.7	-35 58	9.3	9.6	Ao	2	..	42915b	73	5001	40.9	-31 4	10.0	9.1	F5	3	..	42909b
24	3412	40.7	-45 58	9.1	8.4	A3	5	..	20786b	74	3856	40.9	-34 54	7.9	8.4	A2	8	..	42915b
25	2647	40.7	-51 43	9.8	10.0	F5	2	..	24589b	75	3837	40.9	-37 26	7.95	8.1	B8	5	..	42909b
26	1320	40.7	-55 5	7.57	7.9	B5	10	..	24589b	76	3838	40.9	-37 46	9.2	8.5	Ao	4	..	18435b
27	881	40.7	-59 13	8.5	9.1	F5	2	..	12757b	77	3023	40.9	-49 14	9.6	9.4	Ao	3	..	20786b
28	462	40.7	-76 4	10.3	10.7	F5	1	..	20652b	78	1362	40.9	-54 5	10.3	10.3	A	1	..	24589b
29	1248	40.8	+52 31	9.0	9.0	Ao	1	..	37344i	79	871	40.9	-62 44	9.4	9.5	A2	2	..	15516b
30	1583	40.8	+33 16	7.22	8.00	G5	3	..	37569i	80	525	41.0	+66 2	9.5	10.3	G5	2	..	37713i
31	1620	40.8	+32 11	8.6	9.2	Go	3	..	37569i	81	1606	41.0	+29 50	9.31	9.65	F2	2	..	37569i
32	1670	40.8	+11 0	5.30	5.30	Ao	..	0,9	56,85	82	1774	41.0	+2 0	9.0	9.6	Go	2	..	12755b
33	1773	40.8	+2 18	9.0	10.0	Ko	1	..	12755b	83	2178	41.0	-7 17	7.5	8.0	F8	5	3,7	38629i
34	2237	40.8	-5 26	7.02	7.02	Ao	4	..	18560b	84	2023	41.0	-15 12	8.85	8.85	Ao	2	..	12673b
35	2175	40.8	-7 30	9.4	9.4	Ao	3	0,1	44418b	85	2112	41.0	-16 21	9.6	9.6	Ao	4	..	24594b
36	2177	40.8	-7 50	8.9	8.9	Ao	3	2,2	20802b	86	2004	41.0	-18 48	9.1	10.1	Ko	2	..	24594b
37	2058	40.8	-8 34	9.4	9.4	Ao	2	..	44419b	87	6117	41.0	-23 14	10.4	9.5	K2	1	..	44433b
38	2111	40.8	-16 20	8.7	9.0	F2	6	..	18976b	88	5910	41.0	-24 25	7.58	8.3	B8	4	..	44381b
39	2137	40.8	-17 47	8.7	8.7	Ao	3	..	18976b	89	5002	41.0	-25 32	10.4	9.8	K2	1	..	44433b
40	2138	40.8	-17 59	9.0	9.0	B9	3	..	18976b	90	4807	41.0	-28 41	9.2	9.0	F2	4	R	44428b
41	2006	40.8	-22 23	9.1	8.7	Ao	4	..	44381b	91	5030	41.0	-30 52	10.0	8.6	A3	4	..	42909b
42	2007	40.8	-22 57	9.4	9.8	K2	2	..	44433b	92	4358	41.0	-32 40	9.2	8.5	B9	3	..	42909b
43	4896	40.8	-26 39	10.0	9.2	Ko	3	..	44428b	93	3841	41.0	-37 43	5.86	6.0	B8	..	0,8	28,200
44	4998	40.8	-32 0	8.3	8.5	Bo	4	..	42909b	94	3475	41.0	-42 47	9.8	9.6	B9	4	..	20785b
45	4353	40.8	-32 51	9.3	9.1	G5	2	..	42909b	95	3418	41.0	-45 29	9.1	8.7	F8	4	..	20786b
46	3471	40.8	-42 45	7.5	8.5	Ma	3	..	20785b	96	1363	41.0	-54 11	9.1	10.3	K5	1	..	24589b
47	3379	40.8	-46 37	9.6	9.8	G	1	..	20786b	97	1305	41.0	-58 0	6.20	7.4	Ko	3	0,8	42171b
48	2650	40.8	-51 56	6.6	7.0	Go	5	..	8952b	98	1585	41.1	+33 40	5.29	6.36	K2	8	R	37569i
49	1259	40.8	-52 17	8.9	9.7	G5	2	..	24589b	99	1566	41.1	+30 21	8.1	8.9	G5	3	..	37569i
50	883	40.8	-59 4	7.1	7.8	Go	6	..	12757b	100	1624	41.1	+10 39	9.0	9.8	G5	3	..	37581i

## THE HENRY DRAPER CATALOGUE.

62900

7<sup>h</sup> 41<sup>m</sup>.1

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	2053	41.1 m.	- 3 43	7.9	7.9	Ao	3	..	1856ob	51	2210	41.3 m.	-10 41	9.8	9.8	Ao	2	..	44419b
2	2281	41.1	- 6 32	5.72	6.79	K2	5	2,10	1856ob	52	2199	41.3	-14 19	5.11	5.39	Fo	9	0,10	12673b
3	2092	41.1	-11 10	9.0	9.1	A3	2	..	12673b	53	2198	41.3	-14 55	9.1	9.2	A5	2	..	12673b
4	2197	41.1	-14 42	9.1	9.2	A2	2	..	12673b	54	2006	41.3	-18 11	8.5	9.5	Ko	3	..	18976b
5	2113	41.1	-16 44	9.4	9.5	A2	2	..	18976b	55	2007	41.3	-19 6	9.6	9.6	Ao	2	..	18976b
6	2139	41.1	-17 54	9.8	9.9	A3	1	..	18976b	56	2047	41.3	-20 4	9.03	9.6	G5	2	..	44433b
7	2108	41.1	-22 4	9.0	9.0	Ao	3	..	44381b	57	5016	41.3	-25 7	9.5	8.9	Ao	2	..	44381b
8	5010	41.1	-25 8	11.6	9.5	Ao	1	..	44433b	58	4893	41.3	-29 39	8.3	9.2	F8	3	..	44428b
9	5009	41.1	-25 42	10.2	10.0	K2	1	..	44433b	59	5036	41.3	-30 29	9.5	8.6	B8	3	..	44428b
10	5004	41.1	-31 41	10.0	9.7	Oa	1	..	76,29	60	5038	41.3	-31 1	9.5	9.2	F5	2	..	42909b
11	4094	41.1	-33 30	8.6	8.6	G5	3	..	42909b	61	3611	41.3	-38 47	8.6	8.1	A2	3	..	42928b
12	3399	41.1	-40 18	7.9	8.5	Ko	4	..	18435b	62	782	41.3	-63 15	8.7	9.9	K5	1	..	15516b
13	3480	41.1	-42 12	10.5	9.6	Ao	1	..	20785b	63	797	41.3	-65 17	9.2	9.5	Fo	4	..	15274b
14	3026	41.1	-49 23	9.6	9.5	F2	2	..	20786b	64	799	41.3	-67 27	8.9	9.0	A5	3	..	8913b
15	1263	41.1	-52 17	9.2	10.3	K2	1	..	24589b	65	382	41.4	+72 4	7.59	8.37	G5	5	5,3	37559i
16	1262	41.1	-52 41	9.1	9.2	A2	5	..	24589b	66	1736	41.4	+43 16	8.5	9.1	Go	2	..	37463i
17	1417	41.1	-53 51	9.1	10.3	K5	1	..	24589b	67	1763	41.4	+25 42	9.0	9.0	Ao	3	..	37503i
18	1364	41.1	-54 14	10.5	10.5	A	1	..	24589b	68	1816	41.4	+ 4 23	7.9	8.3	F5	5	..	37580i
19	796	41.1	-65 33	8.6	8.9	F2	7	..	15274b	69	1776	41.4	+ 2 7	7.42	7.42	Ao	6	..	37580i
20	622	41.1	-72 21	8.8	9.8	Ko	3	..	15168b	70	1902	41.4	+ 1 19	8.7	9.5	G5	2	..	37580i
21	428	41.2	+71 29	8.0	8.1	A2	4	..	37559i	71	2142	41.4	-17 53	9.8	9.9	A3	2	..	18976b
22	1223	41.2	+55 24	8.7	9.1	F5	3	..	37676i	72	5041	41.4	-30 19	9.5	8.8	A3	3	..	44428b
23	1576	41.2	+48 2	8.08	8.86	G5	4	..	37344i	73	3854	41.4	-37 6	10.8	9.9	F5	1	..	18435b
24	1772	41.2	+37 40	8.8	8.8	Ao	4	..	37448i	74	3855	41.4	-37 52	8.7	7.9	Ao	5	..	18435b
25	1770	41.2	+23 59	8.86	9.28	F5	2	..	37503i	75	2944	41.4	-50 44	10.2	10.0	Go	2	..	24589b
26	1769	41.2	+23 55	7.56	8.56	Ko	4	..	37503i	76	1084	41.5	+60 34	6.70	6.76	A2	7	2,9	37676i
27	1655	41.2	+15 45	8.1	9.1	Ko	2	..	37570i	77	1674	41.5	+49 3	8.5	8.9	F5	2	..	37344i
28	1752	41.2	+14 18	8.3	8.9	Go	2	..	37570i	78	1810	41.5	+23 23	8.6	9.6	Ko	1	..	37503i
29	1817	41.2	- 0 51	8.7	9.5	G5	2	0,1	12772b	79	1792	41.5	+ 3 52	7.9	7.9	B9	4	..	37580i
30	2059	41.2	- 8 13	8.9	9.9	Ko	2	..	44419b	80	2216	41.5	- 9 18	9.6	9.6	Ao	3	..	44419b
31	2212	41.2	- 9 18	9.2	10.0	G5	2	..	44419b	81	2008	41.5	-18 39	8.1	9.2	K2	4	..	18976b
32	2213	41.2	- 9 32	8.9	9.7	G5	2	..	44419b	82	2009	41.5	-18 55	9.1	10.5	Mb	2	..	24594b
33	2210	41.2	- 9 35	9.1	9.6	F8	2	..	44419b	83	2110	41.5	-21 50	9.2	9.5	G5	1	..	44381b
34	2214	41.2	- 9 55	8.3	8.4	A2	3	1,2	12673b	84	2012	41.5	-22 52	10.2	9.5	Ao	1	..	44381b
35	2116	41.2	-17 5	9.1	9.1	Ao	2	..	18976b	85	6149	41.5	-23 21	11.2	9.2	A3	2	..	44381b
36	2109	41.2	-21 19	9.8	9.8	Ao	1	..	44381b	86	4921	41.5	-26 34	9.7	8.6	B9	4	..	44428b
37	4494	41.2	-27 25	8.0	8.4	Ko	3	..	20856b	87	4920	41.5	-26 58	9.5	9.2	F2	2	..	44428b
38	3847	41.2	-37 48	8.0	7.4	Ao	4	..	42928b	88	4504	41.5	-27 47	10.0	9.2	Ao	3	..	44428b
39	3481	41.2	-42 40	9.4	9.3	F2	2	..	20785b	89	5016	41.5	-31 8	10.9	9.2	Ao	2	..	42909b
40	2654	41.2	-51 58	9.0	9.1	Ko	4	..	24589b	90	5019	41.5	-31 40	8.9	8.9	F8	2	..	42909b
41	1264	41.2	-52 36	8.9	7.9	B5	9	..	24589b	91	3861	41.5	-37 39	6.45	6.8	B3	..	2,8	28,200
42	1420	41.2	-53 30	9.4	10.0	Go	1	..	24589b	92	3860	41.5	-37 56	7.9	7.5	Ao	3	..	42928b
43	1418	41.2	-54 1	6.9	7.8	G5	8	..	24589b	93	1266	41.5	-52 26	8.6	9.7	K2	3	..	24589b
44	974	41.2	-58 25	9.1	9.1	Ao	2	..	12757b	94	1252	41.6	+52 3	8.8	9.8	Ko	2	..	37344i
45	872	41.2	-63 0	9.5	9.5	Ao	2	..	15516b	95	1728	41.6	+41 52	8.0	9.0	Ko	3	..	37463i
46	1249	41.3	+52 46	8.0	8.4	F5	3	..	37344i	96	2242	41.6	- 5 12	8.45	9.52	K2	3	..	15262b
47	1832	41.3	+19 2	7.9	7.9	Ao	4	..	37570i	97	2130	41.6	-12 10	7.9	8.9	Ko	2	..	12673b
48	1552	41.3	+16 36	9.0	9.8	G5	1	..	37570i	98	2119	41.6	-16 19	9.2	9.7	F8	4	..	24594b
49	1753	41.3	+14 8	8.2	8.2	B9	6	..	37570i	99	2146	41.6	-17 26	9.4	9.5	A2	2	..	18976b
50	2282	41.3	- 6 19	9.6	9.6	Ao	2	..	44419b	100	2166	41.6	-20 23	8.5	9.6	K	1	..	44381b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

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7<sup>h</sup> 41<sup>m</sup>.6

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	2167	41.6	-20 26	8.5	8.9	Ao	5	..	18976b	51	3422	41.8	-40 38	9.2	8.8	A3	4	..	18435b
2	2168	41.6	-20 58	9.6	10.1	K2	2	..	44433b	52	3427	41.8	-45 44	9.2	8.4	Ao	6	..	27086b
3	2111	41.6	-21 30	9.2	8.9	B9	3	..	44381b	53	1269	41.8	-52 55	8.7	9.7	Ko	3	..	24589b
4	2013	41.6	-22 46	9.1	9.8	K2	1	..	44381b	54	1424	41.8	-53 49	10.0	10.0	Ao	3	..	24589b
5	4925	41.6	-26 15	9.3	8.4	Bo	3	..	44428b	55	678	41.8	-70 59	9.1	9.2	A5	3	..	15274b
6	3410	41.6	-40 14	8.50	8.2	B5	6	..	18435b	56	607	41.8	-71 32	7.2	8.2	Ko	8	..	15168b
7	3391	41.6	-46 46	6.85	6.7	B9	3	0.4	8951b	57	460	41.8	-74 56	10.4	10.4	Ao	2	..	20652b
8	2947	41.6	-50 14	6.75	8.2	F5	6	..	8952b	58	1686	41.9	+36 53	8.1	8.2	A3	6	0.5	37448i
9	1267	41.6	-52 33	9.1	9.4	A3	4	..	24589b	59	1687	41.9	+36 52	9.4	9.9	F8	2	..	37448i
10	1321	41.6	-55 19	8.7	9.5	K5	2	..	24589b	60	1678	41.9	+33 58	8.6	9.6	Ko	2	..	37569i
11	887	41.6	-59 35	9.1	9.1	Ao	1	..	15516b	61	1686	41.9	+21 11	8.0	8.3	Fo	4	..	37503i
12	801	41.6	-67 28	9.5	9.6	A5	3	..	15274b	62	1556	41.9	+15 58	7.9	7.9	B9	4	..	37570i
13	22	41.6	-89 14	8.5	8.6	A2	2	..	22566b	63	1756	41.9	+14 24	8.5	9.5	Ko	2	..	37570i
14	1240	41.7	+56 14	8.6	9.2	Go	2	..	37409i	64	1780	41.9	+ 2 43	7.9	8.0	A5	4	..	37580i
15	1587	41.7	+33 6	7.22	8.00	G5	4	..	37569i	65	2079	41.9	+ 0 16	8.3	8.3	B9	5	..	37580i
16	1614	41.7	+28 55	7.65	8.43	G5	5	..	37569i	66	2086	41.9	- 4 42	9.1	9.7	Go	2	5.2	44419b
17	1837	41.7	+19 18	8.7	8.8	A2	3	..	37570i	67	2085	41.9	- 4 45	9.1	10.1	Ko	1	..	44419b
18	1659	41.7	+15 46	7.7	8.5	G5	2	..	37570i	68	2097	41.9	-11 25	7.74	7.74	Ao	5	0.7	12673b
19	1761	41.7	+13 4	9.0	10.0	K	2	..	37552i	69	2013	41.9	-18 15	9.1	9.5	F5	3	..	18976b
20	1778	41.7	+ 6 18	7.9	9.0	K2	1	..	37581i	70	2114	41.9	-21 20	9.1	8.7	Go	2	..	44381b
21	1785	41.7	+ 5 11	7.01	6.99	B9	6	1.8	37553i	71	5031	41.9	-25 26	9.7	8.6	B5	6	..	44433b
22	1817	41.7	+ 4 49	8.56	9.06	F8	4	..	12755b	72	4512	41.9	-27 33	9.5	8.9	A2	4	..	44428b
23	2061	41.7	- 3 38	8.1	8.7	Go	3	R	12774b	73	4510	41.9	-27 58	8.9	8.4	B9	6	..	44428b
24	2243	41.7	- 3 38	8.1	8.7	A2	3	R	12774b	74	4911	41.9	-29 14	9.5	9.1	Fo	2	..	44428b
25	2243	41.7	- 6 5	7.9	8.0	A2	5	0.4	20802b	75	5051	41.9	-30 47	10.0	9.2	B9	2	..	42909b
26	2149	41.7	-17 35	9.4	9.4	Ao	2	..	18976b	76	5030	41.9	-31 38	9.7	9.1	Ao	2	..	44428b
27	2014	41.7	-22 22	9.0	9.8	Ko	1	..	44381b	77	4113	41.9	-33 59	5.39	6.7	F8	..	0.7 R	28,200
28	6155	41.7	-24 1	6.55	6.0	B5	4	..	8911b	78	3844	41.9	-35 7	9.65	9.3	Ao	3	0.3	18435b
29	5027	41.7	-25 29	10.2	8.9	B9	4	..	44433b	79	3868	41.9	-37 22	6.88	7.0	Ao	7	1.9	42928b
30	4506	41.7	-27 53	10.7	9.5	B9	2	..	44428b	80	3565	41.9	-39 7	7.01	7.4	Ao	6	..	42928b
31	5025	41.7	-31 57	9.0	8.5	Ao	4	..	42909b	81	3419	41.9	-40 25	8.7	9.3	K	2	R	18435b
32	3863	41.7	-37 44	3.72	6.5	K5	..	5.9 R	28,200	82	3432	41.9	-45 36	10.0	9.8	Ao	1	..	20786b
33	3562	41.7	-39 37	7.9	8.5	K2	4	..	18435b	83	3393	41.9	-46 20	9.4	8.5	A3	5	..	20786b
34	3345	41.7	-41 13	10.3	9.4	A2	1	..	20785b	84	2660	41.9	-51 32	9.8	9.2	F5	4	..	24589b
35	3426	41.7	-45 49	10.0	9.4	Ao	2	..	20786b	85	1367	41.9	-54 46	9.2	9.5	Fo	2	..	24589b
36	2656	41.7	-51 33	8.2	8.8	G5	7	..	24589b	86	875	41.9	-61 40	8.1	8.4	F2	2	..	8913b
37	802	41.7	-67 48	10.1	10.4	F	1	..	15274b	87	784	41.9	-63 28	9.5	9.6	A5	2	..	15516b
38	1741	41.8	+18 6	9.0	9.4	F5	2	..	37570i	88	733	41.9	-66 40	8.0	9.0	Ko	7	..	15274b
39	1871	41.8	+ 8 37	8.5	8.5	Ao	2	..	20709b	89	1254	42.0	+52 53	8.4	8.7	F2	2	..	37344i
40	1834	41.8	+ 7 20	8.5	8.6	A3	3	2.1	37581i	90	2009	42.0	+39 33	8.8	9.6	G5	1	..	37463i
41	2060	41.8	- 3 26	8.5	8.5	Ao	1	..	18560b	91	1589	42.0	+33 31	8.0	8.3	F2	5	..	37569i
42	2200	41.8	-14 49	8.6	9.4	G5	1	..	12673b	92	1874	42.0	+ 8 42	8.7	9.3	Go	1	..	20709b
43	2172	41.8	-20 31	8.5	9.8	Ko	1	..	18976b	93	1905	42.0	+ 1 10	7.5	8.3	G5	4	..	37580i
44	2173	41.8	-20 58	9.0	9.8	Go	1	..	44381b	94	2062	42.0	- 3 26	8.7	8.7	Ao	4	..	12774b
45	2016	41.8	-22 54	6.88	7.6	F8	7	..	44381b	95	2063	42.0	- 8 34	7.9	8.7	G5	3	..	38629i
46	2015	41.8	-23 1	7.40	7.2	B8	7	..	44381b	96	2099	42.0	-11 30	9.2	9.2	Ao	1	..	44419b
47	4928	41.8	-26 32	9.7	9.3	Ko	2	..	44428b	97	4937	42.0	-26 39	9.7	8.6	A2	6	..	44428b
48	4929	41.8	-26 44	8.9	9.3	K2	2	..	44428b	98	5032	42.0	-31 11	10.4	9.1	Ao	3	..	42909b
49	4509	41.8	-27 42	8.9	9.5	K5	2	..	44428b	99	3879	42.0	-34 5	11.3	10.8	Oa	..	..	76,29
50	4906	41.8	-29 43	7.9	8.5	Ao	4	..	44428b	100	3846	42.0	-35 48	9.2	9.3	B9	3	..	42915b

THE HENRY DRAPER CATALOGUE.

63100

7<sup>h</sup> 42<sup>m</sup>.0

JOHN G. WILSON LIBRARY,  
HARVARD COLLEGE OBSERVATORY,  
CAMBRIDGE, MASS. 02138

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	2952	42.0	-50 38	10.0	9.7	Ao	3	..	24589b	51	3866	42.3	-36 41	9.2	9.9	G5	1	..	18435b
2	1309	42.0	-57 32	8.5	8.9	Ao	3	..	12757b	52	3632	42.3	-38 44	9.3	8.7	A3	5	..	18435b
3	654	42.1	+64 21	8.0	9.0	Ko	4	..	37676i	53	3709	42.3	-44 39	7.3	7.6	Ao	9	..	20786b
4	1316	42.1	+46 38	8.6	9.0	F5	2	..	37463i	54	3166	42.3	-48 41	7.6	8.2	Ao	3	..	8952b
5	1689	42.1	+21 18	7.9	9.0	K2	2	..	37503i	55	3042	42.3	-49 10	8.6	8.8	Fo	5	..	20786b
6	1673	42.1	+16 58	8.8	8.8	Ao	2	..	37552i	56	1426	42.3	-53 42	10.3	10.3	Ao	2	..	24589b
7	1765	42.1	+9 52	7.22	7.72	F8	4	..	37553i	57	119	42.3	-87 48	9.3	10.3	Ko	1	..	15145b
8	1766	42.1	+9 13	6.95	7.23	Fo	4	..	37553i	58	501	42.4	+68 10	8.9	8.9	B9	4	..	37713i
9	2290	42.1	-6 35	9.1	10.2	K2	1	..	20802b	59	1493	42.4	+45 7	8.1	9.1	Ko	4	..	37463i
10	2185	42.1	-8 2	8.6	9.6	Ko	1	..	44419b	60	1739	42.4	+43 31	9.2	9.2	Ao	3	..	37463i
11	2064	42.1	-8 35	9.1	9.1	Ao	1	..	38629i	61	1837	42.4	+7 36	7.5	7.5	B9	6	1,7	37553i
12	2135	42.1	-12 26	6.39	6.37	B9	7	0,8-	2399b	62	1906	42.4	+1 4	8.3	8.6	Fo	3	..	37580i
13	2122	42.1	-16 54	9.1	9.4	F2	2	..	18976b	63	2247	42.4	-5 20	10.1	10.1	Ao	2	..	44419b
14	2116	42.1	-21 45	9.2	8.7	B9	2	..	44381b	64	2294	42.4	-6 20	9.8	9.8	Ao	2	..	44419b
15	4516	42.1	-27 21	10.0	8.9	B9	5	..	44428b	65	2181	42.4	-20 34	7.24	7.0	B9	7	..	18976b
16	3629	42.1	-38 24	9.2	9.4	Fo	3	..	18435b	66	2117	42.4	-21 12	9.1	8.7	Ao	3	..	44381b
17	3429	42.1	-40 30	7.9	8.7	Ko	5	..	18435b	67	2118	42.4	-21 18	9.8	9.3	Ao	1	..	44381b
18	3534	42.1	-43 31	6.12	6.7	B5	7	3,6	42928b	68	2018	42.4	-22 42	9.8	9.3	A2	4	..	44433b
19	736	42.1	-66 7	9.5	9.8	F	1	..	15274b	69	6180	42.4	-23 16	10.4	9.2	B8	1	..	44381b
20	803	42.1	-67 52	9.1	10.1	Ko	1	..	15274b	70	6178	42.4	-23 54	8.9	9.0	Go	3	..	44381b
21	461	42.1	-74 38	9.1	9.9	G5	6	..	20652b	71	4953	42.4	-26 5	10.7	9.3	B9	2	..	44428b
22	270	42.1	-78 8	9.4	10.8	Ma	4	..	20652b	72	4950	42.4	-27 4	8.3	8.6	A2	7	..	44428b
23	1112	42.2	+59 18	7.8	8.1	Fo	3	5,5	37676i	73	4838	42.4	-28 19	9.7	9.2	F8	3	..	44428b
24	1578	42.2	+48 21	8.0	8.3	Fo	5	..	37344i	74	3359	42.4	-41 25	8.9	9.3	Ao	3	..	20785b
25	1781	42.2	+6 35	9.0	10.0	Ko	1	..	37581i	75	3710	42.4	-44 8	9.1	8.4	Ao	4	..	20786b
26	2152	42.2	-17 59	10.1	10.1	Ao	2	..	18976b	76	3044	42.4	-50 3	7.49	7.6	F2	3	..	8952b
27	2115	42.2	-21 17	7.9	9.0	Ma	3	..	44381b	77	1273	42.4	-52 43	8.1	7.9	B5	8	..	24589b
28	6171	42.2	-23 22	8.5	8.7	K2	4	..	44381b	78	1369	42.4	-54 24	7.4	8.9	K5	4	..	24589b
29	5942	42.2	-24 5	9.3	9.2	Ko	3	..	44433b	79	980	42.4	-58 14	8.2	9.1	Ko	2	..	12757b
30	4942	42.2	-26 30	10.7	10.2	R	1	R	44428b	80	891	42.4	-59 47	9.4	9.4	A	1	..	15516b
31	4832	42.2	-28 12	10.0	9.5	F8	2	..	44428b	81	669	42.4	-68 58	9.0	9.5	F8	2	..	15274b
32	3849	42.2	-35 7	8.25	8.4	B8	6	0,8	18435b	82	463	42.4	-76 12	10.6	10.7	A2	2	..	20652b
33	3875	42.2	-37 18	9.3	9.0	Ao	3	..	42909b	83	655	42.5	+64 12	8.6	9.6	Ko	2	..	37713i
34	3708	42.2	-44 59	8.8	9.0	F2	3	..	20786b	84	1741	42.5	+43 23	9.2	9.2	Ao	3	..	37463i
35	2664	42.2	-51 26	9.8	9.5	Fo	3	..	24589b	85	1668	42.5	+31 10	8.6	8.9	Fo	4	..	37569i
36	387	42.3	+73 0	8.5	9.1	Go	3	..	37559i	86	1677	42.5	+11 22	8.1	8.1	Ao	3	..	20709i
37	737	42.3	+63 5	9.2	9.5	F	2	..	37676i	87	1783	42.5	+2 42	10.4	10.4	Ao	3	..	12755b
38	1615	42.3	+29 1	6.93	7.71	G5	7	..	37569i	88	2188	42.5	-7 48	8.9	8.9	Ao	1	..	38629i
39	1757	42.3	+14 27	9.4	9.5	A2	2	..	37570i	89	2055	42.5	-19 47	9.2	9.8	F5	2	..	44433b
40	1786	42.3	+5 10	8.7	8.8	A5	3	..	12755b	90	2023	42.5	-22 19	9.6	9.8	Go	2	..	44433b
41	2087	42.3	-5 5	10.1	10.1	Ao	1	..	44419b	91	2021	42.5	-22 45	10.3	9.3	Ao	2	R	44433b
42	2246	42.3	-5 28	9.8	11.0	K5	2	..	44419b	92	2022	42.5	-22 57	8.5	9.0	Ko	2	..	44381b
43	2218	42.3	-10 38	8.9	8.9	Ao	1	..	12673b	93	6183	42.5	-23 24	9.7	9.5	G5	1	..	44381b
44	2124	42.3	-16 31	9.1	9.1	A	4	E	24594b	94	5949	42.5	-24 15	9.7	8.7	B9	4	..	44381b
45	2017	42.3	-19 2	9.0	10.2	K5	1	..	18976b	95	..	42.5	-26 6	var.	var.	Md	1	R	44428b
46	5948	42.3	-24 55	10.2	9.2	A2	3	..	44381b	96	4521	42.5	-27 46	10.0	9.5	Fo	2	..	44428b
47	4945	42.3	-26 9	8.7	8.0	B9	5	..	44381b	97	4929	42.5	-29 45	10.7	9.4	A	2	R	44428b
48	4835	42.3	-28 40	8.1	8.3	Fo	8	..	44428b	98	3574	42.5	-39 12	8.7	8.5	A2	6	..	18435b
49	5061	42.3	-30 38	10.0	9.1	Fo	3	..	42909b	99	3435	42.5	-45 34	8.9	9.3	Ko	2	..	20786b
50	3865	42.3	-36 16	8.4	8.7	Oe5	3	..	42909b	100	2955	42.5	-50 23	9.8	9.7	F2	2	..	24589b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

63200

7<sup>h</sup> 42<sup>m</sup>.5

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	2956	42.5	-50 45	10.5	10.0	Ao	3	..	24589b	51	3890	42.8	-37 39	8.6	7.5	B9	3	..	42928b
2	1275	42.5	-52 48	8.3	10.0	Ko	2	..	24589b	52	3718	42.8	-44 31	7.5	8.2	Ko	4	..	20786b
3	1418	42.5	-56 28	8.0	7.9	Ao	5	..	12757b	53	3438	42.8	-45 11	10.0	9.9	G	1	..	18300b
4	788	42.5	-63 10	8.4	8.4	B9	3	..	8913b	54	3407	42.8	-46 32	10.5	9.4	Ao	1	..	20786b
5	460	42.5	-75 38	9.8	10.4	G	2	..	20652b	55	3176	42.8	-48 7	7.6	8.8	K2	6	..	20786b
6	1679	42.6	+44 38	8.32	9.50	K5	2	..	37463i	56	892	42.8	-59 16	8.5	9.6	Ko	1	..	12757b
7	1731	42.6	+41 44	8.8	9.6	G5	2	..	37463i	57	1085	42.9	+60 11	8.8	9.3	F8	2	..	37676i
8	1812	42.6	+23 24	6.21	6.55	F2	7	R	37503i	58	1475	42.9	+50 51	8.7	9.5	G5	2	..	37344i
9	1744	42.6	+18 36	7.7	8.5	G5	8	..	3757oi	59	1779	42.9	+37 54	8.2	8.3	A3	5	..	37448i
10	2100	42.6	-11 57	8.7	9.0	F2	2	..	12673b	60	1815	42.9	+23 5	10.0	10.1	A3	2	..	37503i
11	2154	42.6	-18 3	9.8	9.8	Ao	2	..	18976b	61	1693	42.9	+21 3	8.0	9.0	Ko	3	..	37503i
12	2018	42.6	-18 56	9.4	9.4	B9	3	..	18976b	62	1677	42.9	+12 32	8.3	8.4	A5	2	..	37552i
13	4127	42.6	-33 11	7.9	7.9	B9	6	..	42909b	63	2065	42.9	-3 16	7.9	7.9	Ao	2	..	18560b
14	3886	42.6	-37 42	5.86	6.0	B8	7	1,9 R	10639b	64	2299	42.9	-6 28	9.4	10.4	Ko	1	..	44419b
15	3887	42.6	-37 51	8.9	8.1	Ao	6	..	18435b	65	2228	42.9	-10 4	8.76	8.90	A5	4	..	15262b
16	3364	42.6	-41 10	8.6	9.0	A3	3	..	20785b	66	2211	42.9	-14 21	8.5	9.9	Ma	..	..	M
17	3363	42.6	-41 57	var.	var.	Md	..	R	M	67	2212	42.9	-14 32	9.1	9.1	B9	2	..	12673b
18	3284	42.6	-47 21	7.9	8.4	F5	6	..	20786b	68	2158	42.9	-17 14	9.2	9.3	A2	4	..	18976b
19	875	42.6	-63 4	8.9	9.2	F2	3	..	15516b	69	2061	42.9	-19 9	9.4	10.4	Mb	1	..	24594b
20	1317	42.7	+46 22	8.6	9.2	Go	2	..	37463i	70	2062	42.9	-19 41	7.86	8.3	Ao	7	..	18976b
21	1778	42.7	+37 22	8.4	8.4	Ao	5	E	37569i	71	2027	42.9	-22 17	5.84	5.72	B5	..	2,7	56,124
22	1775	42.7	+24 21	8.83	9.33	F8	2	..	37503i	72	6198	42.9	-23 51	10.7	9.6	Ao	1	..	44381b
23	1779	42.7	+22 40	8.6	9.4	G5	2	..	37503i	73	5050	42.9	-25 16	10.7	9.2	A3	2	..	44433b
24	1780	42.7	+22 10	8.0	8.0	Ao	4	..	37503i	74	4938	42.9	-29 43	7.5	7.7	B8	7	..	44428b
25	1785	42.7	+2 49	8.7	9.1	F5	2	..	3758oi	75	5078	42.9	-31 2	9.0	8.8	B8	3	..	42909b
26	2250	42.7	-5 8	9.6	10.7	K2	1	..	44419b	76	2675	42.9	-51 8	8.6	9.4	G5	4	..	24589b
27	2249	42.7	-5 20	9.8	9.8	Ao	3	0,2	44419b	77	1241	43.0	+56 39	8.7	9.8	K2	1	..	37409i
28	2070	42.7	-8 44	9.2	10.3	K2	1	..	44419b	78	1362	43.0	+51 37	8.2	8.8	Go	3	..	38188i
29	2043	42.7	-15 24	8.3	8.4	A5	6	..	18976b	79	1318	43.0	+46 49	8.6	9.0	F5	2	..	37463i
30	2024	42.7	-22 48	10.1	9.8	Ao	1	..	44381b	80	1820	43.0	+38 17	8.0	8.0	B9	7	..	37448i
31	5956	42.7	-24 27	10.9	10.1	B8	2	..	44433b	81	1595	43.0	+33 36	9.1	9.4	F2	2	..	37569i
32	5049	42.7	-25 8	8.36	8.4	F8	3	..	44381b	82	1476	43.0	+28 44	8.2	8.5	Fo	4	..	37569i
33	5048	42.7	-25 50	9.7	8.9	Ao	2	..	44381b	83	1838	43.0	+7 1	8.1	8.1	B8	5	..	37553i
34	4128	42.7	-33 22	7.5	8.8	K5	2	..	42909b	84	1783	43.0	+6 34	8.3	9.7	Ma	..	..	M
35	3508	42.7	-42 31	9.4	9.3	F8	1	..	20785b	85	1789	43.0	+2 7	9.0	9.1	A3	2	..	3758oi
36	2959	42.7	-50 21	10.5	10.0	G5	1	..	24589b	86	2068	43.0	-3 42	9.1	9.9	G5	2	..	44419b
37	1474	42.8	+28 50	8.0	8.3	Fo	6	..	37569i	87	2253	43.0	-5 12	9.00	9.00	Ao	3	..	15262b
38	1665	42.8	+15 28	8.8	9.6	G5	2	..	37552i	88	2186	43.0	-20 29	9.0	9.2	Ao	2	..	18976b
39	1770	42.8	+13 40	8.16	9.16	Ko	3	..	3757oi	89	5966	43.0	-24 51	10.4	9.2	Ao	1	..	44381b
40	1790	42.8	+5 40	6.95	7.95	Ko	4	0,4	3758oi	90	4533	43.0	-27 41	8.3	9.2	B	2	..	44428b
41	1791	42.8	+5 28	9.0	9.0	Ao	4	..	12755b	91	3895	43.0	-37 32	6.51	7.5	Ko	7	2,4	42909b
42	2102	42.8	-11 10	9.6	10.7	K2	1	..	44419b	92	3639	43.0	-38 50	10.3	9.4	A	2	..	18435b
43	2127	42.8	-16 13	9.6	9.6	A	3	E	24594b	93	3516	43.0	-42 48	8.9	8.5	A5	4	..	20785b
44	2185	42.8	-21 4	9.4	9.8	F8	2	..	44433b	94	746	43.0	-64 23	8.9	9.9	K	1	..	15274b
45	5959	42.8	-24 19	10.0	9.2	F8	3	..	44433b	95	627	43.0	-72 22	3.89	6.0	Ko	..	5, R	28,201
46	5960	42.8	-24 44	9.2	9.3	K2	1	..	44381b	96	464	43.0	-76 14	10.1	10.7	G	1	..	20652b
47	4967	42.8	-26 11	10.0	9.2	A2	2	..	44428b	97	1680	43.1	+43 54	8.6	9.2	Go	2	..	37463i
48	4847	42.8	-29 0	11.2	9.7	A	1	..	44428b	98	1672	43.1	+31 0	8.7	8.7	B9	3	..	37569i
49	4937	42.8	-29 39	8.3	9.2	Ko	2	..	44428b	99	1745	43.1	+18 27	7.7	8.7	Ko	4	..	3757oi
50										100	1909	43.1	+1 40	8.7	9.3	Go	4	..	12755b



## THE HENRY DRAPER CATALOGUE.

63300

7<sup>h</sup> 43<sup>m</sup>.1

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	2303	43.1	- 7 4	9.0	9.4	F5	2	..	44419b	51	1913	43.4	+20 2	7.80	8.80	Ko	3	..	37494i
2	2049	43.1	-15 44	6.71	7.71	Ko	6	..	18976b	52	1772	43.4	+13 38	6.25	7.25	Ko	5	0,8	37553i
3	2191	43.1	-20 32	8.5	9.6	K2	1	..	18976b	53	1797	43.4	+ 5 40	var.	var.	Na	..	R	M
4	4075	43.1	-26 20	9.5	8.6	B9	4	..	44428b	54	2092	43.4	- 4 32	8.5	8.6	A2	3	..	38629i
5	5058	43.1	-31 58	8.7	8.8	Ao	3	..	42909b	55	2305	43.4	- 6 31	6.93	7.01	A3	3	2,9	18560b
6	4399	43.1	-32 38	9.7	8.6	Ao	3	..	42909b	56	2306	43.4	- 6 48	9.1	9.2	A2	4	..	44419b
7	3584	43.1	-39 22	9.3	9.1	Ao	3	..	18435b	57	2067	43.4	-19 18	8.7	9.2	Ao	4	R	18976b
8	3587	43.1	-39 49	6.65	6.2	B5	7	2,8	8897b	58	2066	43.4	-19 44	8.1	8.0	B8	8	..	18976b
9	1373	43.1	-54 56	9.72	9.8	F8	2	..	24589b	59	4982	43.4	-26 27	10.0	8.9	B	3	..	44428b
10	323	43.1	-77 38	9.7	10.0	F2	3	..	20652b	60	4980	43.4	-26 56	9.5	9.2	Ao	3	..	44428b
11	302	43.2	+77 53	9.2	9.3	A2	3	..	37559i	61	4986	43.4	-27 0	11.4	9.3	B9	2	..	44428b
12	1320	43.2	+46 3	7.06	7.12	A2	9	..	37463i	62	4951	43.4	-29 53	9.5	9.7	Go	1	..	44428b
13	1760	43.2	+14 20	9.7	9.7	A	1	..	37570i	63	3378	43.4	-41 27	8.3	8.7	Ao	4	..	20785b
14	1679	43.2	+11 24	8.4	8.5	A2	3	..	20709b	64	3419	43.4	-46 42	9.1	8.4	B9	4	..	20786b
15	1786	43.2	+ 6 4	9.7	9.7	Ao	1	..	20709b	65	878	43.4	-62 13	7.7	8.8	K2	2	..	8913b
16	1790	43.2	+ 2 18	7.7	7.7	Ao	5	..	37580i	66	1949	43.5	+40 2	6.95	8.30	Ma	6	..	37463i
17	2255	43.2	- 5 39	8.5	9.5	Ko	4	5,1	15262b	67	1793	43.5	+ 2 11	9.0	9.0	B9	3	..	37580i
18	2075	43.2	- 8 32	8.7	8.7	Ao	2	..	38629i	68	1828	43.5	- 0 30	8.3	9.3	Ko	2	0,1-	12774b
19	2076	43.2	- 9 5	9.6	9.6	Ao	2	..	44419b	69	2257	43.5	- 5 24	9.0	9.0	Ao	2	..	38629i
20	2230	43.2	- 9 41	9.1	9.1	Ao	2	R	44419b	70	2307	43.5	- 6 35	9.4	9.7	Fo	2	..	44419b
21	2225	43.2	-11 5	9.4	9.5	A5	2	..	44419b	71	4546	43.5	-27 38	8.3	9.3	Ko	2	..	44428b
22	2105	43.2	-11 43	9.4	9.7	F2	3	..	44419b	72	4864	43.5	-28 19	10.9	9.8	A	1	..	44428b
23	2052	43.2	-15 46	6.77	7.84	K2	5	..	18976b	73	4952	43.5	-29 27	7.7	8.6	Go	5	..	44428b
24	5972	43.2	-24 44	10.9	9.8	Ao	2	..	44433b	74	3873	43.5	-35 8	9.15	9.0	Ao	4	..	42915b
25	4946	43.2	-29 50	10.7	9.2	Ao	1	..	44428b	75	3644	43.5	-38 17	9.3	9.3	A2	3	..	18435b
26	5062	43.2	-31 46	9.3	9.1	B9	3	..	44428b	76	3379	43.5	-41 56	8.6	9.0	Fo	2	..	20785b
27	3884	43.2	-36 20	9.5	10.1	A3	2	..	18435b	77	3558	43.5	-43 20	10.5	9.6	Ao	2	..	20785b
28	2678	43.2	-51 50	10.5	10.3	Ao	1	..	24589b	78	3447	43.5	-45 13	9.8	9.9	Ko	2	..	18300b
29	984	43.2	-58 43	8.4	8.7	B9	5	..	12757b	79	1375	43.5	-54 39	8.9	9.4	B9	3	..	24589b
30	207	43.2	-82 15	8.7	9.3	G	1	..	20869b	80	1328	43.5	-55 27	9.0	8.8	B9	4	..	24589b
31	240	43.3	+80 7	6.92	7.99	K2	4	..	37546i	81	1421	43.5	-56 13	9.3	10.3	K	1	E	24589b
32	1177	43.3	+54 23	6.02	6.44	F5	7	..	37409i	82	1420	43.5	-56 29	6.37	7.2	Fo	5	0,3-	42171b
33	1777	43.3	+24 46	7.06	7.48	F5	6	..	37503i	83	303	43.6	+77 50	6.78	6.86	A3	8	..	37559i
34	1778	43.3	+23 59	var.	var.	Pec.	..	R	56,200	84	599	43.6	+65 9	7.60	8.78	K5	5	..	37713i
35	1769	43.3	+ 9 44	8.47	8.97	F8	3	..	20709b	85	1113	43.6	+59 45	7.21	8.21	Ko	4	..	37676i
36	2106	43.3	-11 57	5.52	5.94	F5	8	0,9-	2399b	86	1574	43.6	+30 12	8.4	9.5	K2	1	..	37569i
37	6214	43.3	-23 58	10.0	9.3	Go	1	..	44381b	87	1779	43.6	+24 31	8.09	9.09	Ko	2	..	37503i
38	5062	43.3	-25 9	9.10	9.2	Ko	3	..	44381b	88	1563	43.6	+16 21	9.0	9.6	G	2	..	37570i
39	5064	43.3	-31 40	9.3	8.9	A2	3	..	44428b	89	1684	43.6	+11 4	8.1	8.9	G5	2	..	37553i
40	3917	43.3	-34 6	8.6	8.4	B8	4	..	42909b	90	2098	43.6	- 0 1	8.68	8.63	B8	3	..	37580i
41	3641	43.3	-38 14	9.0	9.1	A2	3	..	18435b	91	2074	43.6	- 3 32	9.0	9.1	A2	3	..	44419b
42	3723	43.3	-44 51	7.84	9.3	K2	3	..	20786b	92	2195	43.6	- 7 55	8.5	8.6	A2	2	..	38629i
43	3444	43.3	-45 55	7.9	7.4	B5	8	..	20786b	93	2228	43.6	-10 45	8.5	8.6	A2	3	..	12673b
44	3295	43.3	-47 27	8.0	8.4	B8	7	..	20786b	94	2236	43.6	-13 50	7.9	8.9	Ko	1	..	12673b
45	3053	43.3	-49 18	8.0	9.7	G5	4	..	20786b	95	2068	43.6	-19 9	7.7	7.8	A2	8	..	18976b
46	389	43.4	+73 29	9.2	10.0	G5	2	..	37559i	96	2122	43.6	-21 13	10.1	10.4	Ao	1	..	44381b
47	429	43.4	+71 21	7.17	7.12	B8	8	..	37559i	97	6225	43.6	-23 52	11.2	9.8	A2	1	..	44433b
48	1226	43.4	+55 0	7.36	8.54	K5	4	..	37409i	98	5095	43.6	-30 50	10.2	9.2	A2	3	..	44428b
49	1496	43.4	+45 36	8.0	9.1	K2	5	..	37463i	99	3874	43.6	-35 50	6.58	7.5	Ko	5	0,8	8897b
50	1768	43.4	+25 21	8.6	9.6	Ko	1	..	37503i	100	3906	43.6	-37 44	7.4	7.8	Ko	5	0,2	42909b



## ANNALS OF HARVARD COLLEGE OBSERVATORY.

63400

7<sup>h</sup> 43<sup>m</sup>.6

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	3595	43.6	-39 5	6.27	6.2	B9	9	..	42928b	51	3303	43.8	-47 52	7.18	7.2	A2	4	1,2R	8952b
2	3181	43.6	-49 0	7.16	6.9	A2	5	..	8952b	52	3184	43.8	-48 40	9.2	9.1	A3	4	..	20786b
3	2684	43.6	-51 19	7.8	8.5	F8	9	..	24589b	53	1332	43.8	-55 57	8.7	8.6	A0	4	..	24589b
4	2686	43.6	-51 52	10.2	10.9	K5	1	..	24589b	54	324	43.8	-78 3	9.1	10.1	K0	4	..	20652b
5	1331	43.6	-55 5	9.67	9.4	F5	2	..	24589b	55	740	43.9	+63 10	7.8	8.6	G5	3	..	37676i
6	737	43.6	-66 58	8.1	9.5	Ma	5	..	15274b	56	1489	43.9	+47 23	8.4	9.0	Go	2	..	37344i
7	465	43.6	-76 36	9.7	10.7	K0	2	..	20652b	57	2310	43.9	- 6 25	9.1	9.4	F2	3	..	44419b
8	739	43.7	+63 20	8.5	8.9	F5	3	..	37676i	58	2153	43.9	-12 58	9.1	9.1	A0	2	..	12673b
9	1478	43.7	+49 56	8.67	9.09	F5	2	..	37344i	59	2197	43.9	-20 22	9.4	9.8	Go	2	..	44433b
10	1656	43.7	+26 31	6.82	7.60	G5	6	..	37503i	60	6233	43.9	-23 32	9.5	9.3	K2	3	..	44433b
11	2258	43.7	- 5 49	8.4	9.4	K0	4	..	44419b	61	5080	43.9	-25 10	10.4	9.5	K2	1	..	44433b
12	2229	43.7	-10 25	9.0	10.0	K0	2	..	44419b	62	5081	43.9	-25 42	4.59	4.40	B2	..	R	28,201
13	2022	43.7	-18 32	9.1	9.1	A0	3	..	18976b	63	4956	43.9	-29 53	9.0	8.5	B8	3	..	44428b
14	2023	43.7	-19 4	8.5	8.7	F8	4	..	18976b	64	4413	43.9	-32 26	7.4	7.9	A5	7	..	42909b
15	2124	43.7	-21 6	9.1	10.7	K5	1	..	44381b	65	3650	43.9	-38 16	5.11	4.94	B3	..	0,10	28,201
16	2125	43.7	-22 5	8.5	8.4	A0	6	..	44381b	66	3565	43.9	-43 6	7.5	7.2	B9	8	..	20785b
17	6228	43.7	-23 57	10.0	9.0	F5	4	..	44433b	67	3569	43.9	-43 9	7.5	7.2	B8	8	..	20785b
18	5987	43.7	-24 10	10.0	8.7	A0	3	..	44381b	68	3058	43.9	-49 6	9.4	9.4	A0	3	..	20786b
19	5074	43.7	-25 4	10.7	9.2	B8	2	..	44433b	69	880	43.9	-62 9	8.7	9.9	K5	1	..	15516b
20	5075	43.7	-25 9	10.7	9.8	K0	2	..	44433b	70	1823	44.0	+38 51	9.0	9.4	F5	1	..	37463i
21	4993	43.7	-26 12	10.7	9.3	A0	2	..	44428b	71	1822	44.0	+38 47	9.0	9.4	F5	1	..	37463i
22	4549	43.7	-27 23	9.7	8.6	B9	5	..	44428b	72	1687	44.0	+34 33	8.5	8.9	F5	3	..	37569i
23	5098	43.7	-30 19	7.64	8.0	B0	6	..	42909b	73	1762	44.0	+14 24	7.83	8.61	G5	4	..	37570i
24	3647	43.7	-38 52	7.10	7.5	F2	3	..	42928b	74	1763	44.0	+14 6	7.63	8.41	G5	4	..	37570i
25	3384	43.7	-41 16	6.97	7.2	B2	5	R	42928b	75	1775	44.0	+13 3	6.52	7.52	K0	7	0,4	37570i
26	3449	43.7	-45 49	10.5	9.4	A0	2	..	20786b	76	2301	44.0	- 2 37	8.6	8.6	A0	2	..	38370i
27	986	43.7	-58 43	7.4	8.5	K5	4	..	12757b	77	2096	44.0	- 4 46	9.1	9.1	B9	3	0,3	15262b
28	768	43.7	-69 50	7.7	8.3	Go	8	..	15274b	78	2095	44.0	- 5 0	9.2	10.6	Ma	..	..	M
29	612	43.7	-71 18	7.7	8.9	K5	4	0,5	15168b	79	2059	44.0	-15 18	9.0	9.0	B9	3	..	18976b
30	466	43.7	-76 12	9.7	10.7	K0	2	..	20652b	80	2062	44.0	-16 0	9.1	9.1	A0	2	..	18976b
31	271	43.7	-79 0	10.2	10.3	A3	3	..	20652b	81	2136	44.0	-16 17	8.7	8.7	A0	4	..	18976b
32	1482	43.8	+28 27	6.65	6.71	A2	8	..	37569i	82	2026	44.0	-19 2	9.1	9.1	B9	2	..	18976b
33	1490	43.8	+27 37	7.7	8.3	Go	6	..	37569i	83	2073	44.0	-19 40	9.6	9.5	A	1	..	18976b
34	1789	43.8	+ 6 0	8.2	8.7	F8	5	..	12755b	84	6239	44.0	-23 29	10.4	9.6	K0	2	..	44433b
35	1826	43.8	+ 4 34	6.51	7.07	Go	8	5,8	37580i	85	5999	44.0	-24 20	7.7	7.4	A0	4	..	8911b
36	1911	43.8	+ 0 54	7.24	7.58	F2	6	..	37580i	86	5088	44.0	-25 11	10.0	8.9	A0	2	..	44381b
37	..	43.8	- 4 30	..	..	A0	2	..	44419b	87	4552	44.0	-27 17	10.4	9.0	Go	2	..	44428b
38	2231	43.8	-10 38	9.6	10.2	Go	2	..	44419b	88	3914	44.0	-37 46	8.6	8.1	B8	5	2,2	42909b
39	2111	43.8	-11 57	8.3	9.5	K5	1	..	12673b	89	3481	44.0	-40 55	9.2	9.3	A	2	E	18289b
40	2054	43.8	-15 18	8.7	9.7	K0	1	..	18976b	90	2971	44.0	-50 46	7.1	7.5	A2	6	..	8952b
41	2056	43.8	-15 37	8.1	8.2	A2	6	..	18976b	91	1378	44.0	-54 20	9.3	10.7	Mb	2	..	24589b
42	2127	43.8	-21 31	9.2	9.8	K0	3	..	44433b	92	1334	44.0	-55 25	9.5	9.8	F2	2	..	24589b
43	R	43.8	-22 21	9.8	10.1	F0	2	..	44433b	93	1426	44.0	-57 0	7.9	9.2	K2	1	..	12757b
44	6230	43.8	-24 2	9.5	8.4	B8	3	..	44381b	94	272	44.0	-78 39	9.5	10.3	G5	3	..	20652b
45	5991	43.8	-24 50	9.5	9.5	K0	2	..	44381b	95	1622	44.1	+28 59	7.9	8.7	G5	4	..	37569i
46	5079	43.8	-25 20	11.8	10.1	F8	2	..	44433b	96	1672	44.1	+15 21	7.84	8.62	G5	3	..	37570i
47	4412	43.8	-32 37	8.6	8.5	F0	4	..	42909b	97	1685	44.1	+12 25	7.3	8.3	K0	4	0,3	37570i
48	3927	43.8	-34 5	8.7	9.0	F2	2	..	42909b	98	1801	44.1	+ 5 21	8.1	8.7	Go	3	..	37580i
49	3421	43.8	-46 34	7.6	7.0	B8	9	2,1	20786b	99	2302	44.1	- 3 1	8.4	8.5	A3	3	..	44419b
50	3423	43.8	-46 49	8.0	7.6	F2	7	..	20786b	100	2234	44.1	-10 6	8.71	8.85	A5	4	..	15262b

## THE HENRY DRAPER CATALOGUE.

63500

7<sup>h</sup> 44<sup>m</sup>.1

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	2028	44.1	— 19 4	9.6	9.5	Ao	1	..	18976b	51	808	44.3	— 65 12	9.3	9.9	G	1	..	15274b
2	2077	44.1	— 19 13	10.1	9.8	A	1	..	18976b	52	122	44.3	— 85 21	9.9	10.0	A2	4	..	22238b
3	2076	44.1	— 20 0	8.38	9.5	Ko	5	0,1	44433b	53	1752	44.4	+ 18 29	8.7	9.1	F5	2	..	37552i
4	6240	44.1	— 23 24	11.2	10.3	F5	2	..	44433b	54	2236	44.4	— 10 5	9.16	9.22	A2	2	..	15262b
5	6241	44.1	— 23 33	11.2	9.3	A2	3	..	44433b	55	2239	44.4	— 10 15	7.41	7.41	Ao	4	..	38629i
6	5006	44.1	— 26 57	9.5	9.2	Ko	2	..	44428b	56	2223	44.4	— 14 21	8.7	8.7	B9	4	..	18976b
7	4554	44.1	— 27 35	9.5	9.2	B5	2	..	44428b	57	6252	44.4	— 23 13	9.5	9.8	K2	2	..	44433b
8	4959	44.1	— 29 8	8.3	8.2	Ao	5	..	44428b	58	6250	44.4	— 24 1	9.7	9.0	B9	2	..	44381b
9	3937	44.1	— 34 36	8.9	8.8	Ao	3	..	42909b	59	5098	44.4	— 25 53	10.0	9.0	Ao	4	..	44428b
10	3903	44.1	— 36 53	9.9	9.9	Ao	1	..	18435b	60	5017	44.4	— 26 47	8.5	8.6	B9	5	..	44428b
11	3654	44.1	— 38 26	8.9	8.7	Ao	6	..	18435b	61	3398	44.4	— 41 17	9.3	9.6	Ko	1	E	18289b
12	805	44.1	— 65 14	9.5	9.8	Fo	2	..	15274b	62	3193	44.4	— 48 18	9.6	9.7	Ao	3	..	20786b
13	806	44.1	— 65 50	6.40	8.4	G5	8	..	8913b	63	1278	44.4	— 52 6	7.10	6.9	B9	7	..	8952b
14	507	44.2	+ 68 32	9.5	10.0	F8	1	..	37713i	64	795	44.4	— 63 7	9.1	9.9	G5	1	..	15516b
15	1821	44.2	+ 23 0	8.0	9.0	Ko	3	..	37503i	65	615	44.4	— 71 22	9.5	10.1	Go	2	..	15168b
16	1883	44.2	+ 8 27	7.9	8.5	Go	3	..	37581i	66	467	44.4	— 74 43	8.9	9.9	Ko	1	..	22237b
17	1790	44.2	+ 5 55	8.1	8.1	Ao	3	0,6	37553i	67	462	44.4	— 75 32	9.6	9.7	A3	5	..	20652b
18	1828	44.2	+ 4 1	8.4	8.4	Ao	3	..	37580i	68	254	44.4	— 79 11	9.1	9.4	F2	6	..	20652b
19	1842	44.2	— 1 25	8.5	9.7	K5	1	..	12772b	69	1364	44.5	+ 51 53	8.6	9.4	G5	1	..	38188i
20	2097	44.2	— 4 24	7.8	8.8	Ko	7	2,3	15262b	70	1781	44.5	+ 37 29	7.7	8.0	Fo	6	..	37569i
21	2171	44.2	— 17 9	8.0	8.4	F5	6	..	18976b	71	1782	44.5	+ 37 3	8.8	9.8	Ko	2	..	37448i
22	2202	44.2	— 20 44	9.4	9.5	Ao	3	0,1	44433b	72	1753	44.5	+ 17 57	8.7	8.8	A3	2	..	37552i
23	5095	44.2	— 25 30	10.4	8.7	A	4	R	44381b	73	2035	44.5	— 22 31	10.1	9.8	Ko	2	..	44433b
24	5091	44.2	— 25 32	9.7	8.4	A	4	R	44381b	74	2036	44.5	— 22 53	10.3	9.8	A2	3	..	44433b
25	5011	44.2	— 26 5	10.9	9.5	B9	2	..	44428b	75	6260	44.5	— 23 36	11.2	9.6	A3	3	..	44433b
26	4962	44.2	— 29 49	9.0	9.9	K5	1	..	44428b	76	5018	44.5	— 26 45	8.1	8.4	B9	6	..	44428b
27	4416	44.2	— 32 13	8.1	8.8	K2	2	..	42909b	77	3621	44.5	— 39 38	9.3	8.1	B9	7	..	18435b
28	3906	44.2	— 37 3	9.9	9.9	Ao	1	..	18435b	78	3435	44.5	— 46 22	5.26	5.07	B2	..	1,7-	28,201
29	3915	44.2	— 37 13	10.1	9.6	Ao	2	..	18435b	79	3437	44.5	— 46 46	7.14	7.0	B8	4	5,9	42162b
30	3310	44.2	— 47 56	9.2	8.7	Ao	5	..	20786b	80	2976	44.5	— 50 56	9.6	10.6	K5	1	..	24589b
31	3062	44.2	— 49 57	7.24	7.1	B5	7	2,9	8952b	81	897	44.5	— 59 34	8.4	9.0	G5	2	..	15516b
32	1428	44.2	— 54 0	9.6	10.6	K	1	..	24589b	82	797	44.5	— 63 57	8.3	8.3	Ao	4	..	8913b
33	883	44.2	— 61 45	8.1	8.8	K5	2	..	8913b	83	771	44.5	— 69 16	8.2	9.2	Ko	2	..	15274b
34	1110	44.3	+ 57 17	7.50	8.57	K2	3	..	37676i	84	770	44.5	— 69 35	6.21	6.0	Ao	8	..	9003b
35	1848	44.3	+ 19 40	8.5	8.5	Ao	3	..	37494i	85	469	44.5	— 77 2	8.8	9.3	F8	6	..	20652b
36	1803	44.3	+ 3 29	7.7	8.3	Go	5	..	37580i	86	1228	44.6	+ 55 29	6.24	6.24	Ao	8	..	37676i
37	2098	44.3	— 4 43	9.2	9.3	A3	3	0,3	44419b	87	2017	44.6	+ 39 5	8.5	8.6	A3	4	..	37463i
38	2085	44.3	— 8 25	9.6	9.7	A2	2	..	44419b	88	1784	44.6	+ 37 21	6.70	7.77	K2	5	..	37569i
39	2236	44.3	— 10 51	8.9	9.3	F5	4	..	44419b	89	1601	44.6	+ 33 30	6.02	6.02	Ao	10	..	37569i
40	2237	44.3	— 10 56	6.80	7.08	Fo	6	0,7-	38629i	90	1785	44.6	+ 24 24	7.01	7.29	Fo	7	..	37503i
41	2029	44.3	— 18 55	7.5	8.6	K2	5	..	18976b	91	1830	44.6	+ 4 23	8.7	8.7	Ao	3	..	12755b
42	2129	44.3	— 21 8	9.8	9.8	B9	3	..	44433b	92	2100	44.6	— 4 19	9.0	10.0	Ko	2	..	44419b
43	2130	44.3	— 21 45	7.32	8.4	Ko	5	..	44381b	93	2114	44.6	— 11 11	7.9	7.9	Ao	5	0,3-	12673b
44	6008	44.3	— 24 16	9.5	9.2	F8	3	..	44433b	94	2068	44.6	— 16 6	8.5	8.6	A2	5	..	18976b
45	5015	44.3	— 26 37	9.7	8.9	Ao	3	..	44428b	95	2138	44.6	— 17 5	9.6	9.6	Ao	2	..	18976b
46	4561	44.3	— 27 38	10.4	9.5	Ao	1	..	44428b	96	R	44.6	— 22 59	11.2	9.8	Ao	2	..	44433b
47	4885	44.3	— 28 6	8.0	8.9	Ko	7	..	44428b	97	6014	44.6	— 24 13	10.0	9.3	G5	2	..	44433b
48	1429	44.3	— 53 36	10.0	10.0	Ao	2	..	24589b	98	6019	44.6	— 24 44	8.9	8.3	Go	5	..	44381b
49	1428	44.3	— 56 7	9.2	9.2	Ao	4	..	24589b	99	5022	44.6	— 26 22	9.3	8.6	Ao	4	..	44428b
50	1429	44.3	— 57 1	8.8	10.1	F5	2	..	12757b	100	4166	44.6	— 33 19	9.2	8.6	Ao	3	..	42909b

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7<sup>h</sup> 44<sup>m</sup>.6

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	3912	44.6	-37 2	9.3	9.6	Go	1	..	18435b	51	1847	44.9	-2 3	8.82	8.90	A3	2	..	3837oi
2	3922	44.6	-37 26	8.6	8.1	Ao	4	0,2	42909b	52	2306	44.9	-2 27	7.9	7.9	Ao	4	..	3837oi
3	3622	44.6	-39 19	9.0	9.4	Ko	1	..	18435b	53	2205	44.9	-8 4	8.0	8.5	F8	2	..	38629i
4	3405	44.6	-41 21	8.3	8.5	B8	4	..	20785b	54	2239	44.9	-9 42	8.3	9.4	K2	2	..	15262b
5	3438	44.6	-46 50	8.2	8.2	Go	2	..	20786b	55	2164	44.9	-13 6	6.12	6.10	B9	7	1,9	2399b
6	1279	44.6	-52 50	10.3	10.3	Ao	2	..	24589b	56	2229	44.9	-15 6	8.06	9.13	K2	3	..	18976b
7	1381	44.6	-54 52	8.9	9.0	A3	4	..	24589b	57	2143	44.9	-17 5	9.8	9.8	A	1	..	18976b
8	898	44.6	-59 34	8.5	9.1	G5	1	..	15516b	58	2133	44.9	-21 59	9.2	9.8	F5	3	..	44433b
9	326	44.6	-77 43	8.5	9.3	G5	7	..	20652b	59	6023	44.9	-24 17	9.5	9.5	K2	3	..	44433b
10	1676	44.7	+31 52	6.85	6.99	A5	8	..	37569i	60	6022	44.9	-24 40	5.32	6.9	Go	..	0,6	28,201
11	1581	44.7	+30 31	7.6	8.4	G5	4	..	37569i	61	3588	44.9	-43 45	7.6	8.7	K5	2	..	20785b
12	1786	44.7	+24 3	8.43	8.77	F2	4	..	37503i	62	3587	44.9	-44 1	8.9	8.2	Ao	4	..	20785b
13	1825	44.7	+23 18	9.4	10.4	Ko	2	..	37503i	63	3747	44.9	-44 18	8.5	8.4	Ao	6	..	20786b
14	1682	44.7	+17 44	8.5	8.5	Ao	4	..	3757oi	64	2983	44.9	-50 56	10.2	10.0	Ko	1	..	24589b
15	1779	44.7	+9 10	8.5	8.5	Ao	4	..	37581i	65	1281	44.9	-52 11	9.7	10.9	K5	1	..	24589b
16	1841	44.7	+7 33	8.3	8.7	F5	1	..	37581i	66	1432	44.9	-53 5	7.0	7.1	B9	5	..	8952b
17	1791	44.7	+6 29	8.3	9.3	Ko	2	0,2	20709b	67	1431	44.9	-53 23	9.7	10.1	F5	3	..	24589b
18	1806	44.7	+3 51	8.7	8.8	A3	2	..	3758oi	68	751	44.9	-64 10	9.3	9.6	Fo	3	..	15274b
19	1805	44.7	+3 5	8.5	8.6	A5	4	..	3758oi	69	672	44.9	-68 31	8.4	9.8	Ma	3	..	15274b
20	2201	44.7	-7 46	8.4	8.4	Ao	3	..	38629i	70	273	44.9	-78 9	6.85	6.1	A2	4	..	10820b
21	2132	44.7	-21 36	10.1	10.3	Ao	2	..	44433b	71	1735	45.0	+41 33	8.6	9.4	G5	1	..	37463i
22	5110	44.7	-25 22	10.9	9.0	B9	2	..	44433b	72	1693	45.0	+36 31	9.8	9.9	A3	1	..	37448i
23	5108	44.7	-25 45	9.0	9.0	Go	4	..	44428b	73	1922	45.0	+20 41	8.6	8.6	Ao	4	..	37503i
24	4573	44.7	-27 10	8.9	8.7	Ao	5	..	44428b	74	1568	45.0	+16 14	8.3	9.1	G5	3	0,4	37552i
25	5126	44.7	-30 31	7.06	7.1	B5	8	..	42909b	75	1641	45.0	+10 1	7.92	8.26	F2	3	..	37553i
26	2980	44.7	-50 39	9.2	8.8	A5	4	..	24589b	76	2102	45.0	-4 18	9.1	9.5	F5	3	3,3	15262b
27	990	44.7	-58 51	7.2	8.1	F8	7	..	12757b	77	2206	45.0	-7 19	8.6	8.7	A2	4	..	44419b
28	1115	44.8	+58 56	8.1	9.1	Ko	2	..	37676i	78	2145	45.0	-16 37	8.5	9.3	G5	4	..	18976b
29	1480	44.8	+49 54	8.17	8.45	Fo	3	..	38188i	79	2039	45.0	-22 19	8.3	9.3	Ma	3	..	44381b
30	1323	44.8	+46 12	6.53	6.61	A3	9	..	37704i	80	6279	45.0	-23 38	11.2	9.3	Ao	3	..	44433b
31	1677	44.8	+31 52	8.1	8.2	A5	5	..	37569i	81	5115	45.0	-25 8	10.7	9.2	Ao	1	..	44429b
32	1782	44.8	+9 0	8.3	8.6	Fo	2	..	37553i	82	5131	45.0	-30 20	9.0	9.2	G5	1	..	42909b
33	1845	44.8	-1 49	8.3	8.7	F5	3	..	3837oi	83	3633	45.0	-39 45	8.3	8.8	Ko	3	..	18435b
34	2089	44.8	-8 34	9.8	10.4	Go	1	..	44419b	84	3464	45.0	-45 45	9.1	9.4	G5	1	..	20786b
35	5030	44.8	-26 18	8.9	8.7	A2	5	..	44428b	85	888	45.0	-61 12	7.4	8.4	G5	4	..	8913b
36	5028	44.8	-26 40	10.4	9.3	Ao	2	..	44428b	86	1826	45.1	+38 4	9.4	9.5	A5	3	..	37448i
37	4973	44.8	-30 1	7.3	7.7	G5	7	0,7R	42909b	87	1692	45.1	+34 3	8.8	9.3	F8	2	..	37448i
38	5096	44.8	-31 22	6.71	6.8	B8	4	..	42934b	88	1661	45.1	+26 38	8.8	9.9	K2	1	..	37503i
39	4172	44.8	-33 42	8.9	8.8	Fo	2	..	42909b	89	1791	45.1	+22 31	8.1	8.7	Go	3	..	37503i
40	3490	44.8	-40 24	5.96	7.5	Ma	..	0,3	56,124	90	1766	45.1	+13 57	9.4	10.2	G5	1	..	37552i
41	3541	44.8	-42 16	8.2	7.9	Ao	5	2,7	8897b	91	1792	45.1	+5 59	7.7	7.7	B9	6	..	37553i
42	3439	44.8	-46 17	9.2	9.9	K2	2	R	18300b	92	1848	45.1	-1 26	7.7	8.7	Ko	5	..	3837oi
43	1430	44.8	-53 12	9.4	9.7	F2	4	..	24589b	93	2091	45.1	-8 13	9.2	9.2	Ao	4	..	44419b
44	810	44.8	-65 29	8.9	9.9	Ko	2	..	15274b	94	2090	45.1	-8 20	8.0	9.4	Ma	1	..	38629b
45	1951	44.9	+40 35	9.1	9.1	Ao	1	..	37463i	95	2117	45.1	-11 41	9.1	9.4	F2	2	..	44419b
46	1773	44.9	+25 22	8.2	8.6	F5	4	..	37503i	96	2247	45.1	-13 50	6.64	7.82	K5	7	..	18976b
47	1684	44.9	+17 8	7.8	8.6	G5	3	..	3757oi	97	2146	45.1	-16 59	5.54	6.54	Ko	9	..	18976b
48	1676	44.9	+15 5	7.24	7.58	F2	6	..	3757oi	98	2134	45.1	-21 23	10.1	10.1	F2	2	..	44433b
49	1640	44.9	+10 47	8.3	9.1	G5	4	..	20709b	99	6283	45.1	-23 33	10.2	9.3	Ko	3	..	44433b
50	1842	44.9	+6 58	8.7	8.8	A2	2	0,2	37581i	100	6030	45.1	-24 37	3.47	5.6	Gop	..	5,9R	2477c

## THE HENRY DRAPER CATALOGUE.

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7<sup>h</sup> 45<sup>m</sup>.1

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	5117	45.1	-25 32	10.2	10.4	F5	3	..	44433b	51	2265	45.4	-5 48	9.4	9.4	B9	2	..	44419b
2	5038	45.1	-26 21	9.7	9.0	Fo	3	..	44428b	52	2096	45.4	-8 56	5.78	6.85	K2	7	..	38629i
3	4582	45.1	-27 36	10.0	8.9	Ao	4	..	44428b	53	2041	45.4	-18 41	8.7	9.7	Ko	1	..	18976b
4	4906	45.1	-28 29	8.5	9.3	G5	2	..	44428b	54	2085	45.4	-19 57	6.48	7.2	Go	9	..	18976b
5	3910	45.1	-35 30	7.9	8.5	Ma	4	5,3	42915b	55	2041	45.4	-22 7	9.6	9.3	F2	3	..	44433b
6	3930	45.1	-37 12	9.3	9.6	Ao	2	..	18435b	56	6291	45.4	-23 18	10.2	9.5	F2	3	..	44433b
7	3446	45.1	-47 2	8.6	8.1	B5	6	..	20786b	57	6293	45.4	-23 38	9.3	8.7	A5	3	..	44381b
8	1283	45.1	-52 56	8.8	9.4	B9	6	..	24589b	58	5127	45.4	-25 7	11.2	9.7	F8	1	..	44433b
9	992	45.1	-58 40	8.02	7.8	B9	7	..	12757b	59	4588	45.4	-27 35	7.8	8.6	A2	7	..	44428b
10	1604	45.2	+32 57	9.0	10.0	Ko	2	..	37569i	60	4916	45.4	-28 28	10.7	9.2	B9	3	..	44428b
11	1583	45.2	+30 48	8.0	8.0	B9	7	..	37569i	61	4984	45.4	-30 0	9.65	8.8	B8	2	..	42909b
12	1624	45.2	+29 26	6.90	7.68	G5	7	..	37569i	62	4441	45.4	-32 42	9.3	8.8	A2	2	..	42909b
13	1787	45.2	+24 42	9.8	9.9	A2	2	..	37503i	63	3470	45.4	-45 28	9.6	10.5	K5	1	..	18300b
14	1849	45.2	-1 12	7.9	7.9	Ao	5	..	38370i	64	2701	45.4	-51 25	8.9	8.8	B8	7	..	24589b
15	2093	45.2	-8 29	9.1	9.4	Fo	3	..	44419b	65	1433	45.4	-54 1	8.0	8.6	G5	6	..	24589b
16	2092	45.2	-9 2	8.3	9.5	K5	2	..	15262b	66	1341	45.4	-55 53	9.7	10.1	F5	2	..	24589b
17	2250	45.2	-13 31	8.9	9.3	F5	2	..	18976b	67	1324	45.4	-57 45	8.3	9.2	F5	2	..	12757b
18	2230	45.2	-14 24	9.1	9.1	Ao	2	..	18976b	68	993	45.4	-58 50	9.0	9.3	Fo	2	..	12757b
19	2211	45.2	-21 2	7.8	7.4	B8	8	..	18976b	69	1072	45.5	+58 29	7.35	7.63	Fo	6	..	37676i
20	2040	45.2	-22 38	9.8	9.5	B9	1	..	44381b	70	1738	45.5	+41 22	8.9	9.0	A2	4	..	37463i
21	6285	45.2	-23 59	9.0	9.8	Ko	3	..	44433b	71	1792	45.5	+22 51	8.8	9.2	F5	2	..	37503i
22	5121	45.2	-25 36	9.5	9.2	B9	3	..	44428b	72	1698	45.5	+21 4	9.5	9.8	F	2	..	37503i
23	4981	45.2	-29 38	9.5	9.7	A2	1	..	44428b	73	1767	45.5	+14 0	8.8	8.9	A2	4	0,3	37552i
24	3674	45.2	-38 35	9.2	9.3	Fo	2	..	18435b	74	1795	45.5	+6 6	7.4	7.5	A2	8	..	37553i
25	3069	45.2	-49 31	7.8	8.5	F2	7	..	20786b	75	1807	45.5	+5 6	8.4	9.0	G	2	R	12755b
26	1383	45.2	-54 28	10.3	10.4	A2	2	..	24589b	76	1804	45.5	+2 43	8.7	9.2	F8	4	..	37580i
27	1340	45.2	-55 35	9.1	10.1	K5	2	..	24589b	77	1803	45.5	+2 3	9.2	9.2	Ao	3	R	15244b
28	891	45.2	-61 29	9.1	9.1	Ao	3	..	15516b	78	1853	45.5	-1 21	8.3	8.3	Ao	5	..	38370i
29	209	45.2	-82 46	9.2	10.2	K	1	..	20869b	79	2211	45.5	-7 40	9.0	9.0	Ao	3	..	44419b
30	528	45.3	+66 45	8.6	8.9	F2	5	..	37713i	80	2121	45.5	-11 20	9.1	10.1	Ko	1	..	44419b
31	1247	45.3	+56 13	9.2	10.0	G5	1	..	37409i	81	2136	45.5	-21 33	9.4	9.2	Ao	2	..	44381b
32	2247	45.3	-10 28	9.4	9.4	Ao	3	..	44419b	82	5128	45.5	-25 17	10.7	9.2	G5	1	..	44433b
33	2040	45.3	-18 45	8.5	..	Rp	2	R	18976b	83	5046	45.5	-26 45	9.3	9.2	A2	3	..	44428b
34	2083	45.3	-19 15	6.80	8.0	Ko	7	..	18976b	84	5048	45.5	-26 55	10.4	9.3	Ao	2	..	44428b
35	5040	45.3	-26 6	10.0	9.2	B8	3	..	44428b	85	5140	45.5	-30 19	7.58	6.8	F5	7	..	42909b
36	5044	45.3	-26 20	8.9	9.7	Ma	1	..	44428b	86	3970	45.5	-35 0	6.06	5.9	Ao	6	1,10	42934b
37	3940	45.3	-37 33	8.6	8.7	F2	3	..	42909b	87	3471	45.5	-45 13	7.90	8.1	B8	7	..	20786b
38	3939	45.3	-37 57	7.15	7.1	F5	7	3,4	42909b	88	1286	45.5	-52 48	9.1	9.5	F5	5	..	24589b
39	3502	45.3	-41 2	9.3	9.8	G5	1	E	18289b	89	994	45.5	-58 50	8.7	9.6	Fo	4	..	12757b
40	3415	45.3	-41 33	9.2	9.0	Ao	2	..	20785b	90	809	45.5	-67 18	9.4	9.5	A2	4	..	15274b
41	3754	45.3	-45 1	8.44	9.3	K2	1	..	20786b	91	959	45.6	+62 25	8.2	8.8	Go	3	..	37676i
42	3469	45.3	-45 52	10.0	9.3	Ao	2	..	20786b	92	1740	45.6	+41 48	8.0	9.0	Ko	2	..	37463i
43	3447	45.3	-46 9	9.1	9.0	B9	6	..	20786b	93	1696	45.6	+36 25	6.98	8.33	Ma	4	..	37569i
44	3451	45.3	-46 50	4.64	6.3	Ko	..	0,6R	28,201	94	1696	45.6	+35 13	9.4	9.5	A2	2	..	37569i
45	1284	45.3	-52 19	10.6	10.6	Ao	1	..	24589b	95	1695	45.6	+34 6	8.0	8.4	F5	4	..	37569i
46	886	45.3	-62 47	8.8	9.8	Ko	2	..	15516b	96	1571	45.6	+16 19	9.4	9.4	A	1	..	37552i
47	743	45.3	-66 50	8.7	9.3	Go	5	..	15274b	97	1844	45.6	+7 41	7.25	7.25	Ao	7	..	37553i
48	385	45.4	+72 7	7.24	7.66	F5	7	5,5	37559i	98	1833	45.6	+4 42	6.62	7.40	G5	6	5,8	37580i
49	1737	45.4	+41 24	8.5	8.8	F2	5	..	37463i	99	1818	45.6	+3 32	6.30	7.08	G5	5	0,8	37553i
50	1757	45.4	+18 13	9.0	10.0	K	2	..	37552i	100	2087	45.6	-3 21	7.05	7.13	A3	6	..	38370i

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

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7<sup>h</sup> 45<sup>m</sup>.6

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	2325	45.6	— 6 36	9.0	9.6	Go	4	..	44419b	51	4452	45.8	— 32 10	9.0	8.5	F5	4	..	42909b
2	2179	45.6	— 17 48	8.7	8.8	A2	3	..	18976b	52	4451	45.8	— 33 3	5.70	7.1	K5	..	5,8	56,124
3	6037	45.6	— 24 48	10.0	9.3	Ko	1	..	44429b	53	3510	45.8	— 40 40	9.9	9.0	A	3	E	18289b
4	4186	45.6	— 33 5	7.9	8.5	B	3	R	42909b	54	1388	45.8	— 54 10	8.8	8.9	Go	4	..	24589b
5	3686	45.6	— 38 32	9.9	9.6	B9	2	..	18435b	55	273	45.9	+ 77 55	7.7	8.7	Ko	3	..	37559i
6	3557	45.6	— 43 4	7.4	7.0	B3	5	0,4-	8897b	56	1693	45.9	+ 11 25	8.1	8.9	G5	2	..	37553i
7	3606	45.6	— 43 52	9.8	10.2	Mb	..	..	M	57	1797	45.9	+ 6 11	8.5	8.6	A2	3	..	20709b
8	3452	45.6	— 46 42	9.4	8.5	Ao	5	..	20786b	58	1819	45.9	+ 3 10	9.4	9.4	Ao	2	..	15244b
9	3331	45.6	— 47 47	7.9	8.7	G5	5	..	20786b	59	1927	45.9	+ 0 55	7.89	8.89	Ko	4	..	12755b
10	892	45.6	— 61 7	8.2	8.5	Ao	5	..	15516b	60	2315	45.9	— 2 15	8.3	8.3	Ao	4	..	3837oi
11	1117	45.7	+ 59 13	8.4	9.4	Ko	2	..	37409i	61	2080	45.9	— 15 17	9.4	9.4	Ao	2	..	18976b
12	1482	45.7	+ 50 33	8.6	8.9	F2	2	..	38188i	62	2082	45.9	— 15 47	9.1	9.2	A2	2	..	18976b
13	1684	45.7	+ 44 5	9.7	9.7	A	1	..	37463i	63	2092	45.9	— 19 19	9.1	9.3	A5	2	..	18976b
14	1697	45.7	+ 36 31	6.97	7.47	F8	6	..	37569i	64	2045	45.9	— 22 55	9.2	9.8	G5	1	..	44381b
15	1628	45.7	+ 29 25	8.2	9.0	G5	2	..	37569i	65	4604	45.9	— 27 36	9.7	8.9	B8	4	..	44428b
16	1778	45.7	+ 25 5	8.0	8.8	G5	5	..	37503i	66	4936	45.9	— 28 47	10.0	8.9	B9	5	..	44428b
17	1645	45.7	+ 10 39	9.2	9.2	Ao	1	..	20709i	67	3690	45.9	— 38 12	9.5	8.7	Fo	3	..	18435b
18	1924	45.7	+ 1 1	9.4	9.4	Ao	4	..	12755b	68	3512	45.9	— 40 27	6.60	6.5	B5	7	..	42928b
19	2311	45.7	— 3 4	8.5	8.5	Ao	2	..	3837oi	69	3456	45.9	— 46 22	8.8	8.4	Ao	5	..	20786b
20	2267	45.7	— 5 34	7.50	7.50	Ao	2	..	18560b	70	1389	45.9	— 54 28	6.8	7.5	Ko	10	..	24589b
21	2326	45.7	— 6 47	8.7	9.9	K5	1	..	44419b	71	998	45.9	— 58 17	8.0	8.8	A2	5	..	12757b
22	2089	45.7	— 19 17	6.40	7.7	Ko	8	..	18976b	72	890	45.9	— 60 32	8.9	9.4	A2	1	..	15516b
23	2043	45.7	— 22 35	9.2	9.5	F8	2	..	44381b	73	510	46.0	+ 68 31	8.0	9.2	K5	3	..	37713i
24	4596	45.7	— 28 0	10.0	8.7	Ao	1	R	44428b	74	2018	46.0	+ 39 47	7.09	7.37	Fo	8	..	37463i
25	4993	45.7	— 30 1	10.4	9.2	A3	1	..	44428b	75	1846	46.0	+ 7 36	8.7	8.7	Ao	3	..	20709b
26	4447	45.7	— 32 52	9.2	8.6	Ao	2	..	42909b	76	2316	46.0	— 2 53	8.3	9.1	G5	3	..	44419b
27	3943	45.7	— 37 10	8.7	8.7	A5	4	..	42909b	77	2106	46.0	— 4 26	9.4	9.7	Fo	2	..	44419b
28	3559	45.7	— 42 17	9.1	8.8	G5	1	..	20785b	78	2235	46.0	— 14 50	9.2	9.2	B9	3	..	18976b
29	3474	45.7	— 45 49	9.4	9.9	Ko	2	..	18300b	79	2220	46.0	— 20 30	9.4	9.8	G5	2	..	44433b
30	2991	45.7	— 50 17	10.0	9.7	Fo	2	..	24589b	80	2142	46.0	— 21 25	10.1	10.1	Fo	2	..	44433b
31	1287	45.7	— 52 8	9.7	9.7	Ao	4	..	24589b	81	5062	46.0	— 26 17	10.7	9.2	B9	2	..	44428b
32	811	45.7	— 67 11	8.3	8.3	Ao	5	0,3	8913b	82	3694	46.0	— 38 45	7.9	7.8	Ko	3	5,6	8897b
33	466	45.7	— 74 1	8.1	8.1	Ao	5	..	22237b	83	3653	46.0	— 40 0	7.52	8.4	Ma	4	..	18435b
34	168	45.8	+ 84 41	7.38	7.38	Ao	6	..	37546i	84	3566	46.0	— 42 26	9.0	8.1	B9	4	1,5	8897b
35	1368	45.8	+ 51 34	8.2	8.8	Go	3	..	38188b	85	3614	46.0	— 43 50	8.3	7.2	Ao	7	..	20785b
36	1769	45.8	+ 14 24	7.9	8.9	Ko	3	..	37552i	86	1290	46.0	— 52 26	7.2	7.1	A2	5	..	8952b
37	1834	45.8	+ 4 46	8.80	8.86	A2	3	..	12755b	87	386	46.1	+ 71 57	7.52	7.52	Ao	7	..	37559i
38	2108	45.8	+ 0 19	6.57	7.57	Ko	6	..	37580i	88	1195	46.1	+ 53 2	8.6	9.6	Ko	3	..	38188i
39	1855	45.8	— 1 7	8.5	9.7	K5	1	..	12774b	89	1854	46.1	+ 19 35	6.13	7.13	Ko	7	0,7	37552i
40	2091	45.8	— 3 33	9.2	9.3	A2	3	..	44419b	90	1574	46.1	+ 16 19	9.4	9.7	F	1	..	37552i
41	2104	45.8	— 4 51	8.5	9.5	Ko	4	5,4	44419b	91	1843	46.1	— 0 14	9.2	9.6	F5	2	..	15244b
42	2270	45.8	— 5 8	9.30	9.80	F8	3	..	44419b	92	2100	46.1	— 8 15	9.0	9.0	Ao	3	1,2	15262b
43	2269	45.8	— 5 48	9.6	9.6	Ao	2	..	44419b	93	2251	46.1	— 10 4	8.61	8.67	A2	1	..	38629i
44	2152	45.8	— 16 30	10.1	10.1	Ao	1	..	18976b	94	2253	46.1	— 10 53	6.32	7.32	Ko	3	0,7	2399b
45	2091	45.8	— 19 30	9.2	9.2	Ao	3	..	18976b	95	2174	46.1	— 12 55	8.5	8.6	A2	4	..	12673b
46	2218	45.8	— 20 36	9.0	9.8	G5	3	..	44433b	96	5067	46.1	— 26 18	8.7	8.3	B8	6	..	44428b
47	6310	45.8	— 23 33	6.64	7.3	Fo	3	..	8911b	97	5123	46.1	— 31 23	10.7	9.1	A2	2	..	44428b
48	4602	45.8	— 27 24	10.7	9.2	B9	2	..	44428b	98	3924	46.1	— 35 51	6.97	7.3	Ko	6	2,3	42909b
49	4933	45.8	— 28 12	10.7	10.0	Fo	2	..	44428b	99	3428	46.1	— 41 43	8.6	9.0	Ao	6	..	20785b
50	5115	45.8	— 31 20	10.4	9.1	A5	2	..	42909b	100	3334	46.1	— 47 47	10.2	10.2	Ko	1	..	18300b

## THE HENRY DRAPER CATALOGUE.

63900

7<sup>h</sup> 46<sup>m</sup>.1

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1347	46.1	-55 24	9.0	9.0	F2	6	..	24589b	51	3337	46.3	-47 40	10.0	10.3	K2	1	..	18300b
2	745	46.1	-66 28	8.9	9.2	Fo	4	..	15274b	52	3336	46.3	-48 2	8.9	9.6	K2	2	..	20786b
3	1327	46.2	+46 1	7.57	8.35	G5	4	..	37704i	53	1293	46.3	-52 59	10.3	10.3	Ao	3	..	24589b
4	1589	46.2	+30 11	8.1	8.1	Ao	5	..	37569i	54	901	46.3	-59 40	8.8	8.7	F5	2	..	15516b
5	1781	46.2	+13 45	9.0	9.6	G	2	..	37552i	55	1699	46.4	+34 42	8.7	9.5	G5	2	..	37448i
6	2109	46.2	+0 9	8.7	8.8	A2	3	3,2	15244b	56	1799	46.4	+6 4	9.0	9.4	F5	2	..	20709b
7	1844	46.2	-0 13	9.23	10.23	Ko	1	..	15244b	57	2110	46.4	+0 38	8.5	8.5	Ao	4	..	37580i
8	2273	46.2	-5 46	9.4	9.7	Fo	3	..	44419b	58	2253	46.4	-9 23	9.0	9.6	Go	3	..	15262b
9	2331	46.2	-6 31	9.8	9.8	Ao	2	..	44419b	59	2183	46.4	-17 16	9.8	9.8	Ao	2	..	18976b
10	2157	46.2	-16 37	9.1	10.1	Ko	1	..	18976b	60	2051	46.4	-18 39	9.0	9.3	Fo	4	..	18976b
11	2049	46.2	-18 42	8.1	8.4	F2	7	..	18976b	61	2145	46.4	-21 48	7.5	8.9	Ko	4	..	44381b
12	2048	46.2	-22 16	9.0	9.3	F8	4	..	44433b	62	2049	46.4	-22 56	9.2	9.8	K2	2	..	44433b
13	2047	46.2	-22 39	9.6	9.8	F5	2	..	44433b	63	5145	46.4	-25 22	11.2	9.5	Ao	1	..	44433b
14	5139	46.2	-25 24	9.5	8.6	B9	3	1,2	44381b	64	4950	46.4	-28 48	8.1	8.9	F8	5	..	44428b
15	4610	46.2	-27 44	8.0	8.9	Mb	4	..	44428b	65	4951	46.4	-29 0	10.0	9.8	Ao	4	..	44428b
16	4948	46.2	-28 15	10.0	9.2	G5	3	..	44428b	66	3950	46.4	-37 19	9.3	9.3	Ao	2	..	18435b
17	5005	46.2	-29 18	9.3	8.9	B9	1	..	44428b	67	3663	46.4	-39 30	8.6	7.6	A2	3	..	8897b
18	5157	46.2	-30 23	10.7	9.7	Ao	1	..	44428b	68	3338	46.4	-47 25	9.2	9.3	A2	3	..	20786b
19	4194	46.2	-33 25	9.2	8.6	Ao	4	..	42909b	69	807	46.4	-63 15	9.3	9.3	Ao	4	..	15516b
20	3940	46.2	-36 45	9.9	9.9	A2	2	..	18435b	70	1121	46.5	+59 39	8.9	9.7	G5	1	..	37676i
21	3697	46.2	-38 41	10.6	9.3	Ao	2	..	18435b	71	1830	46.5	+37 58	9.5	9.9	F5	1	..	37448i
22	3458	46.2	-46 8	4.25	4.01	Bo	..	5, R	28,201	72	1590	46.5	+29 58	9.16	10.16	K	1	..	37569i
23	3461	46.2	-46 52	10.9	9.9	A5	2	..	18300b	73	1696	46.5	+12 51	8.3	9.1	G5	2	..	37552i
24	3223	46.2	-48 32	8.9	8.8	Ao	4	..	20786b	74	1848	46.5	+7 20	8.3	8.4	A5	2	..	37553i
25	2993	46.2	-50 10	10.0	9.2	Ao	4	..	24589b	75	1808	46.5	+2 1	5.11	5.06	B8	..	R	56,85
26	1437	46.2	-56 13	6.18	7.5	Ko	6	R	12757b	76	2254	46.5	-9 9	6.66	6.66	Ao	6	..	38629i
27	775	46.2	-69 15	8.6	8.6	B8	5	..	15274b	77	2257	46.5	-10 55	7.9	8.9	Ko	2	..	12673b
28	445	46.3	+69 10	8.7	9.7	Ko	1	..	37713i	78	2176	46.5	-12 22	8.0	9.1	K2	3	..	12673b
29	529	46.3	+66 10	10.2	10.3	A5	2	..	37713i	79	2160	46.5	-16 53	9.1	9.7	Go	3	..	18976b
30	743	46.3	+63 37	8.6	9.1	F8	5	..	37676i	80	2095	46.5	-19 23	8.9	9.0	F5	4	..	18976b
31	1230	46.3	+54 58	7.21	7.99	G5	3	..	37676i	81	2221	46.5	-20 26	10.3	10.1	A2	2	..	44433b
32	1609	46.3	+33 49	8.5	8.5	B9	4	..	37569i	82	6334	46.5	-23 40	10.9	9.6	Ao	2	..	44433b
33	1634	46.3	+32 16	9.1	9.2	A3	2	..	37569i	83	5077	46.5	-26 53	10.2	9.5	Ao	2	..	44428b
34	1791	46.3	+9 39	8.1	8.9	G5	1	..	20709i	84	4616	46.5	-28 3	9.7	8.9	Ao	4	..	44428b
35	1838	46.3	+4 3	9.0	10.1	K2	1	..	15244b	85	5012	46.5	-29 4	9.0	8.9	G5	3	..	44428b
36	1860	46.3	-1 50	8.3	9.3	Ko	2	..	12774b	86	5130	46.5	-31 55	8.1	8.8	Go	4	..	42909b
37	2111	46.3	-4 49	9.4	9.8	F5	2	..	44419b	87	3528	46.5	-40 20	9.2	8.5	Ao	5	..	18435b
38	2103	46.3	-8 33	9.2	10.3	K2	1	..	44419b	88	3527	46.5	-40 40	7.1	7.4	B8	4	..	42928b
39	2256	46.3	-10 28	9.2	9.3	A2	3	..	15262b	89	1350	46.5	-55 29	9.1	10.4	K5	1	..	24589b
40	2124	46.3	-11 12	9.1	9.1	Ao	1	..	44419b	90	1700	46.6	+34 23	8.6	9.4	G5	2	..	37569i
41	6327	46.3	-23 14	10.7	10.7	Go	2	..	44433b	91	1665	46.6	+26 11	9.0	10.0	Ko	2	..	37503i
42	6326	46.3	-23 49	9.5	9.3	B9	1	..	44381b	92	1707	46.6	+21 32	9.4	9.5	A2	2	..	37503i
43	3987	46.3	-34 51	7.9	7.9	F5	5	..	42909b	93	1699	46.6	+11 25	8.3	9.5	K5	1	..	20709b
44	3944	46.3	-36 52	8.9	9.9	G5	1	..	18435b	94	1649	46.6	+10 30	8.5	8.6	A2	2	..	37553i
45	3700	46.3	-38 52	10.3	9.4	A2	2	..	18435b	95	1794	46.6	+9 28	8.4	9.2	G5	1	..	20709b
46	3520	46.3	-40 8	9.5	9.4	Ao	2	..	18435b	96	2334	46.6	-6 44	7.38	7.44	A2	5	R	44419b
47	3762	46.3	-44 30	6.28	7.2	Ko	9	0,4	20785b	97	2222	46.6	-7 43	9.8	9.8	B9	2	..	44419b
48	3460	46.3	-46 37	5.98	5.7	B2	..	3,6	28,201	98	2240	46.6	-15 0	8.76	9.94	K5	1	..	18976b
49	3335	46.3	-47 27	9.4	9.3	Ao	2	..	20786b	99	2086	46.6	-16 2	8.6	8.7	A2	5	..	18976b
50										100	2185	46.6	-18 0	6.66	7.66	Ko	7	..	18976b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

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7<sup>h</sup> 46<sup>m</sup>.6

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	2096	46.6	-19 12	9.1	8.9	A2	4	..	18976b	51	1637	46.9	+32 27	8.4	8.9	F8	4	..	37569i
2	6336	46.6	-23 48	10.9	9.8	F8	2	..	44433b	52	1824	46.9	+ 3 32	6.59	7.94	Ma	6	5,4	37580i
3	6335	46.6	-23 56	9.7	9.3	B8	1	..	44381b	53	2118	46.9	- 4 25	9.6	9.6	A0	3	..	44419b
4	5154	46.6	-25 15	10.7	9.2	A2	2	..	44429b	54	2335	46.9	- 6 43	9.2	9.2	B9	4	..	44419b
5	5152	46.6	-25 51	9.0	9.3	K5	1	..	44428b	55	2090	46.9	-15 38	8.1	8.5	F5	5	..	18976b
6	4619	46.6	-27 28	9.7	9.5	K0	1	..	44428b	56	2093	46.9	-15 59	9.0	10.2	K5	1	..	18976b
7	3932	46.6	-35 30	8.9	9.0	A0	3	..	18435b	57	2162	46.9	-16 21	8.1	9.3	K5	3	..	18976b
8	3933	46.6	-35 32	7.35	7.9	K2	4	..	18435b	58	2163	46.9	-16 47	8.5	8.9	F5	5	..	18976b
9	3953	46.6	-36 52	9.3	9.4	A2	3	..	18435b	59	2226	46.9	-20 58	9.8	10.1	A2	2	R	44433b
10	3707	46.6	-38 50	9.3	9.4	K0	2	..	18435b	60	2052	46.9	-22 47	8.5	8.7	Go	5	..	44381b
11	3672	46.6	-39 32	8.6	7.6	A2	4	..	8897b	61	2051	46.9	-22 57	10.1	10.8	A0	1	..	44381b
12	3669	46.6	-39 57	9.00	8.8	F8	3	..	18435b	62	6350	46.9	-23 58	9.7	9.0	B9	2	..	44381b
13	3437	46.6	-41 54	7.9	7.8	B9	4	1,3	8897b	63	5091	46.9	-26 47	9.5	9.3	K0	2	..	44428b
14	3226	46.6	-48 24	9.4	8.7	B5	3	..	20786b	64	4964	46.9	-29 0	10.2	9.8	K5	1	..	44428b
15	1296	46.6	-52 46	9.3	10.1	G5	3	..	24589b	65	5139	46.9	-31 16	10.9	8.9	A0	2	..	44428b
16	809	46.6	-63 28	9.0	9.5	F8	2	..	15516b	66	3940	46.9	-36 0	7.90	7.5	B9	5	..	42909b
17	..	46.6	-77 43	..	..	G5	1	..	20652b	67	1442	46.9	-56 10	5.54	6.7	K0	..	0,5-	56,124
18	960	46.7	+62 17	7.29	8.07	G5	5	..	37676i	68	904	46.9	-59 55	9.17	8.8	F5	2	..	15516b
19	2022	46.7	+39 43	7.62	8.69	K2	5	..	37463i	69	1742	47.0	+41 16	8.5	8.8	F2	5	..	37463i
20	1790	46.7	+37 47	9.8	10.8	K	1	..	37448i	70	1638	47.0	+32 27	10.2	10.7	F8	1	..	37569i
21	1814	46.7	+ 5 37	7.8	8.2	F5	6	..	37553i	71	1800	47.0	+22 32	9.4	9.5	A2	3	..	37503i
22	1823	46.7	+ 3 47	9.0	9.0	A0	2	..	12755b	72	1860	47.0	+19 4	8.4	8.5	A3	5	..	37552i
23	2087	46.7	-15 55	10.1	10.4	F0	2	..	18976b	73	2227	47.0	- 7 41	8.5	9.3	G5	2	..	15262b
24	6340	46.7	-23 23	10.9	9.8	F5	1	..	44433b	74	2225	47.0	- 8 3	9.0	9.0	A0	3	..	44419b
25	6339	46.7	-23 42	10.9	9.8	A2	1	..	44433b	75	2110	47.0	- 9 3	8.3	9.3	K0	1	..	38629i
26	5156	46.7	-25 53	8.7	8.6	B9	7	..	44428b	76	2256	47.0	- 9 38	8.9	8.9	A0	3	..	15262b
27	4620	46.7	-27 19	10.4	9.3	F8	1	..	44428b	77	2179	47.0	-12 34	6.46	6.80	F2	6	0,7-	2399b
28	3935	46.7	-36 0	7.05	7.0	B9	6	0,8	8897b	78	2164	47.0	-16 35	9.8	9.8	A	1	..	18976b
29	3674	46.7	-39 16	9.3	9.8	F5	2	R	18435b	79	2186	47.0	-17 24	9.2	9.5	F2	2	..	18976b
30	3441	46.7	-41 27	9.5	9.6	A0	2	..	18289b	80	2227	47.0	-20 41	9.2	10.1	K0	2	..	44433b
31	3342	46.7	-47 9	10.0	9.4	B9	2	..	20786b	81	2148	47.0	-21 16	9.4	9.8	K2	1	..	44433b
32	1352	46.7	-55 46	8.9	9.2	Go	3	..	24589b	82	2053	47.0	-22 16	9.1	9.8	G5	2	..	44433b
33	469	46.7	-73 36	9.5	9.6	A2	2	..	22237b	83	2054	47.0	-22 59	9.1	8.7	F0	3	..	44381b
34	530	46.8	+66 51	8.9	9.7	G5	2	..	37713i	84	5092	47.0	-26 48	11.4	9.7	A	1	..	44428b
35	1679	46.8	+48 54	8.7	9.3	G	2	..	37344i	85	5173	47.0	-30 6	8.95	8.9	F2	3	..	42909b
36	1832	46.8	+23 45	8.5	9.0	F8	3	..	37503i	86	4472	47.0	-32 44	8.9	8.5	B9	4	..	42909b
37	1809	46.8	+ 2 14	9.7	9.7	A0	2	..	15244b	87	4214	47.0	-33 25	8.7	8.2	A2	5	..	42909b
38	1930	46.8	+ 1 11	9.4	10.5	K2	2	..	15244b	88	448	47.1	+69 3	8.6	8.9	F0	3	..	37713i
39	2259	46.8	-10 7	9.36	10.43	K2	1	..	44419b	89	1832	47.1	+38 47	8.1	9.2	K2	3	..	37448i
40	6343	46.8	-23 13	11.2	9.8	A0	1	..	44433b	90	1684	47.1	+30 56	8.2	8.8	Go	4	R	37569i
41	6348	46.8	-23 38	10.0	9.2	Go	1	..	44381b	91	1496	47.1	+28 9	8.5	8.8	F	3	..	37569i
42	6060	46.8	-24 17	6.42	7.0	A0	4	..	8911b	92	1803	47.1	+22 36	7.12	8.12	K0	5	..	37503i
43	5161	46.8	-25 8	9.7	9.3	F5	1	..	44429b	93	2112	47.1	+ 0 22	9.0	9.5	F8	2	..	15244b
44	4624	46.8	-27 19	10.9	9.2	A0	2	..	44428b	94	2276	47.1	- 5 17	9.2	9.2	A0	4	..	44419b
45	3444	46.8	-41 37	10.3	9.6	A2	1	..	18289b	95	2111	47.1	- 8 29	10.5	10.5	A0	1	..	44419b
46	3344	46.8	-47 57	9.8	9.0	A2	4	..	20786b	96	2267	47.1	-13 38	5.34	5.90	Go	7	..	2399b
47	892	46.8	-60 39	8.2	9.0	A2	4	..	15516b	97	2056	47.1	-19 5	9.1	9.3	A0	3	..	18976b
48	110	46.9	+86 40	8.8	10.2	Ma	1	..	37546i	98	2228	47.1	-20 52	9.4	10.3	K5	2	..	44433b
49	387	46.9	+72 45	8.8	9.4	Go	2	..	37559i	99	6067	47.1	-24 48	10.9	9.2	A0	2	..	44429b
50	1791	46.9	+37 41	9.8	10.2	F5	2	..	37448i	100	4474	47.1	-32 48	7.4	8.5	G5	4	..	42909b



## THE HENRY DRAPER CATALOGUE.

64100

7<sup>h</sup> 47<sup>m</sup>.1

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	4218	m. 47.1	° -33 49	8.3	7.9	Ao	7	..	42909b	51	2191	m. 47.4	° -17 23	9.8	9.9	A3	2	..	18976b
2	4003	47.1	-34 7	7.9	8.2	B9	6	..	42909b	52	2235	47.4	-20 55	5.78	6.8	Ko	10	5,6-	18976b
3	4002	47.1	-34 28	8.6	8.7	B8	4	..	18435b	53	6071	47.4	-24 36	8.9	8.9	K5	3	..	44381b
4	1440	47.1	-53 47	9.5	10.1	Go	3	..	24589b	54	5176	47.4	-25 10	9.5	9.5	K2	1	..	44433b
5	1395	47.1	-54 6	9.6	10.6	Ko	1	..	24589b	55	5101	47.4	-26 58	10.2	8.9	B9	3	..	44428b
6	1498	47.2	+47 38	6.38	7.38	Ko	7	0,7	37704i	56	5185	47.4	-30 41	9.7	9.1	B9	2	..	44428b
7	1497	47.2	+28 18	6.74	6.74	Ao	9	..	37569i	57	5154	47.4	-31 23	8.3	8.3	B9	7	..	42909b
8	1701	47.2	+12 17	8.2	8.2	Ao	3	0,2	37552i	58	4221	47.4	-33 23	7.9	8.4	Ko	4	..	42909b
9	1843	47.2	+4 5	8.3	8.3	B8	4	0,6 R	37560i	59	3966	47.4	-36 13	8.0	8.1	Ao	5	..	42909b
10	2322	47.2	-2 48	6.86	7.00	A5	7	..	38370i	60	3002	47.4	-50 18	10.5	9.5	A2	2	..	24589b
11	2338	47.2	-6 39	9.2	9.2	Ao	2	..	44419b	61	1400	47.4	-54 28	8.4	9.5	Ko	4	..	24589b
12	2112	47.2	-8 57	8.6	9.6	Ko	1	..	38629i	62	1401	47.4	-54 50	7.22	7.6	Ao	3	..	42171b
13	2258	47.2	-9 24	7.5	7.6	A3	4	..	38629i	63	1640	47.5	+32 36	8.0	8.8	G5	4	..	37569i
14	2263	47.2	-10 46	7.7	8.5	G5	3	..	12673b	64	1688	47.5	+15 38	7.83	7.89	A2	7	..	37552i
15	2127	47.2	-11 45	9.1	10.1	Ko	2	E	15262b	65	1827	47.5	+3 38	6.99	7.05	A2	5	1,8	37553i
16	2182	47.2	-12 43	9.1	9.1	Ao	2	..	12673b	66	1811	47.5	+2 48	8.7	9.9	K5	1	..	15244b
17	2245	47.2	-15 0	8.21	8.27	A2	5	..	18976b	67	2340	47.5	-6 57	8.3	8.3	Ao	4	..	44419b
18	3585	47.2	-42 36	8.3	8.4	G5	3	..	20785b	68	2262	47.5	-9 10	9.2	9.3	A2	2	..	44419b
19	1300	47.2	-52 24	9.1	8.9	Ao	6	..	24589b	69	2266	47.5	-10 31	8.7	9.2	F8	4	..	15262b
20	1396	47.2	-54 30	8.1	8.7	Ko	2	..	24598b	70	2248	47.5	-14 38	8.7	9.8	K2	1	..	18976b
21	1397	47.2	-54 34	7.4	8.0	G5	6	..	24589b	71	2061	47.5	-18 52	8.9	8.9	Ao	5	..	18976b
22	1398	47.2	-54 39	8.2	8.7	F8	5	..	24589b	72	2236	47.5	-20 28	6.88	7.3	F5	4	0,3-	11036b
23	1073	47.3	+58 45	8.6	8.6	B9	5	..	37676i	73	2056	47.5	-22 43	10.1	9.8	B9	2	..	44433b
24	1485	47.3	+50 2	7.82	8.82	Ko	2	..	38188i	74	6074	47.5	-24 57	8.55	8.3	Ao	5	..	44381b
25	1610	47.3	+32 58	8.1	9.1	Ko	2	..	37569i	75	5104	47.5	-26 24	9.5	8.9	B9	5	..	44428b
26	1783	47.3	+25 43	9.4	9.7	Fo	2	..	37503i	76	5037	47.5	-29 16	9.5	9.2	Ao	2	..	44428b
27	1576	47.3	+16 19	9.4	10.0	G	2	..	37552i	77	5187	47.5	-30 16	9.5	10.4	K5	1	..	44428b
28	2260	47.3	-10 0	9.01	9.57	Go	4	..	15262b	78	3723	47.5	-38 4	10.3	9.4	Ao	2	..	18435b
29	2264	47.3	-10 36	9.6	10.0	F5	2	..	15262b	79	3548	47.5	-40 28	8.7	8.5	Fo	4	..	18435b
30	2265	47.3	-10 55	9.1	10.2	K2	1	..	44419b	80	3592	47.5	-42 22	10.2	9.0	Ao	2	..	20785b
31	2190	47.3	-17 8	9.1	9.2	A3	2	..	18976b	81	3780	47.5	-44 20	6.36	7.2	Ko	4	5,9	42162b
32	2189	47.3	-18 2	8.7	9.5	G5	2	..	18976b	82	3103	47.5	-49 54	9.6	9.2	G	2	E	18300b
33	2188	47.3	-18 6	7.8	7.8	B9	8	..	18976b	83	1403	47.5	-54 34	9.1	10.1	Ko	2	..	24589b
34	2055	47.3	-22 48	9.1	9.8	Ko	1	..	44381b	84	907	47.5	-59 8	7.2	8.1	G5	5	0,4	12757b
35	6068	47.3	-24 22	10.2	9.2	Fo	3	..	44433b	85	908	47.5	-60 2	5.82	6.3	F2	9	..	8913b
36	5148	47.3	-31 22	10.2	8.8	A2	2	..	42909b	86	815	47.5	-63 26	8.1	8.1	Ao	3	..	8913b
37	3946	47.3	-35 58	11.0	9.9	Ao	1	..	18435b	87	1795	47.6	+37 0	7.12	7.90	G5	6	..	37569i
38	3689	47.3	-39 29	9.0	8.4	B8	4	..	18435b	88	1689	47.6	+15 51	7.7	8.7	Ko	2	..	37552i
39	3690	47.3	-39 53	8.9	8.7	F5	5	..	18435b	89	1690	47.6	+15 10	7.84	8.40	Go	4	..	37552i
40	3001	47.3	-50 34	8.2	9.2	K2	7	..	24589b	90	1854	47.6	+6 58	8.1	8.7	Go	4	..	20709b
41	893	47.3	-60 55	7.6	7.8	Fo	4	..	8913b	91	1932	47.6	+1 51	9.0	9.3	F2	2	..	37560i
42	618	47.3	-71 28	7.7	8.0	F2	7	..	24527b	92	2325	47.6	-2 22	7.7	9.1	Ma	3	0,2	12774b
43	512	47.4	+67 43	9.2	10.2	Ko	2	..	37713i	93	2277	47.6	-5 40	8.5	9.5	Ko	5	..	15262b
44	1499	47.4	+47 49	5.69	6.69	Ko	8	2,8	37704i	94	2278	47.6	-5 45	9.1	9.1	Ao	3	..	15262b
45	1499	47.4	+27 1	4.99	5.05	A2	..	0, R	56,85	95	2233	47.6	-8 2	9.1	9.1	Ao	2	..	44419b
46	1826	47.4	+3 30	8.7	9.8	K2	4	2,3	15244b	96	2133	47.6	-11 24	8.5	8.6	A2	4	..	12673b
47	2121	47.4	+4 52	9.8	11.2	Ma	1	0,1	44419b	97	2238	47.6	-21 2	8.9	9.5	K2	3	..	44433b
48	2339	47.4	-6 33	8.0	8.1	A2	3	..	38629i	98	2150	47.6	-21 28	9.2	9.0	Ao	3	..	44381b
49	2113	47.4	-8 31	9.1	10.1	Ko	1	..	44419b	99	5183	47.6	-25 34	10.0	8.6	B8	6	1,4	44428b
50	2129	47.4	-11 36	9.1	9.9	G5	3	E	15262b	100	5106	47.6	-26 14	10.2	9.2	A2	3	..	44428b



## ANNALS OF HARVARD COLLEGE OBSERVATORY.

64200

7<sup>h</sup> 47<sup>m</sup>.6

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	4636	47.6	-27 7	8.7	8.9	F8	6	..	44428b	51	1074	47.9	+58 23	9.5	10.3	G5	1	..	37409i
2	3353	47.6	-48 2	8.4	7.4	B5	7	..	20786b	52	1585	47.9	+48 25	7.8	7.8	Ao	5	..	37344i
3	1361	47.6	-55 43	8.4	8.3	A	7	R	24589b	53	1688	47.9	+44 15	8.0	8.8	G5	6	0.5	37463i
4	757	47.6	-64 34	8.6	8.7	A3	3	..	8913b	54	1703	47.9	+34 33	8.4	9.5	K2	2	..	37448i
5	778	47.6	-69 27	8.5	9.5	Ko	2	..	15274b	55	1787	47.9	+12 56	8.3	8.7	F5	2	..	37552i
6	1780	47.7	+42 3	7.68	8.75	K2	5	0.3	37463i	56	1873	47.9	-1 11	8.1	8.1	Ao	4	..	3837oi
7	1668	47.7	+26 49	8.0	8.5	F8	3	..	37503i	57	1872	47.9	-1 45	8.3	9.1	G5	3	..	12774b
8	1785	47.7	+24 59	9.5	10.3	G5	2	..	37503i	58	2263	47.9	-9 46	9.2	9.7	F8	2	..	44419b
9	1769	47.7	+18 2	8.5	9.9	Ma	1	..	37552i	59	2270	47.9	-13 36	6.87	7.87	Ko	7	..	18976b
10	1696	47.7	+17 6	7.53	8.53	Ko	5	..	37552i	60	2101	47.9	-15 11	8.51	8.93	F5	4	..	18976b
11	1577	47.7	+15 58	7.5	8.5	Ko	3	..	37552i	61	2168	47.9	-16 26	8.7	9.0	Fo	3	..	18976b
12	1773	47.7	+14 46	8.64	9.14	F8	2	..	37552i	62	2199	47.9	-17 37	9.2	9.3	A3	3	..	18976b
13	1785	47.7	+12 57	8.5	9.0	F8	2	..	37552i	63	2198	47.9	-17 46	8.3	8.3	B9	7	..	18976b
14	1933	47.7	+1 4	8.1	9.1	Ko	4	0.4	3756oi	64	2057	47.9	-22 17	10.5	9.8	A2	1	..	44381b
15	2124	47.7	-4 28	8.5	9.6	K2	5	2.5	44419b	65	4992	47.9	-28 30	9.7	9.2	G5	2	..	44428b
16	2123	47.7	-4 33	9.2	10.2	Ko	1	..	15262b	66	4019	47.9	-34 23	9.5	9.0	Ao	3	..	18435b
17	2196	47.7	-17 32	8.5	8.8	F2	6	..	18976b	67	3981	47.9	-37 23	8.3	8.4	B8	5	2.2	42909b
18	2151	47.7	-21 27	9.8	9.5	Ao	3	..	44433b	68	3464	47.9	-41 45	9.3	9.8	K2	1	..	18289b
19	6078	47.7	-24 52	11.2	9.2	B5	3	..	44433b	69	3596	47.9	-42 42	9.2	8.4	Ao	2	..	20785b
20	5107	47.7	-26 39	8.5	9.5	K5	1	..	44428b	70	3487	47.9	-46 37	8.2	7.8	Fo	8	..	20786b
21	5040	47.7	-29 24	7.9	8.3	A2	6	..	44428b	71	511	48.0	+68 43	9.0	9.8	G5	2	..	37713i
22	4488	47.7	-32 28	7.5	8.4	K2	3	..	42909b	72	1075	48.0	+58 13	8.8	9.9	K2	1	..	37409i
23	3953	47.7	-35 33	8.9	9.3	Ko	2	..	42909b	73	1834	48.0	+38 21	8.4	9.2	G5	4	..	37448i
24	3973	47.7	-37 18	9.3	9.4	Fo	2	..	18435b	74	1830	48.0	+3 5	9.0	9.1	A2	3	..	3756oi
25	3004	47.7	-50 15	5.82	6.9	K5	..	5.7	28,201	75	1814	48.0	+2 14	8.7	9.5	G5	2	..	3756oi
26	758	47.7	-64 50	8.8	9.6	G5	3	..	15274b	76	1849	48.0	-0 49	8.1	9.1	Ko	1	..	12774b
27	752	47.7	-66 6	8.7	9.9	K5	1	..	15274b	77	2236	48.0	-7 43	8.4	8.4	Ao	2	..	38629i
28	1683	47.8	+48 57	8.9	9.3	F5	2	..	38188i	78	2235	48.0	-8 5	9.4	9.4	Ao	3	..	44419b
29	1687	47.8	+44 16	9.2	9.8	Go	2	..	37463i	79	2121	48.0	-8 20	9.6	9.6	Ao	3	..	44419b
30	1781	47.8	+42 51	8.6	9.7	K2	1	..	37463i	80	2123	48.0	-9 1	9.1	9.1	Ao	3	..	44419b
31	1702	47.8	+35 1	8.97	9.47	F8	2	..	37569i	81	5113	48.0	-26 29	10.0	9.2	Fo	2	..	44428b
32	1641	47.8	+29 28	8.4	9.4	Ko	3	..	37569i	82	4649	48.0	-27 5	10.9	9.7	F8	2	..	44428b
33	1828	47.8	+3 20	9.7	9.8	A2	2	..	15244b	83	4648	48.0	-27 24	10.7	9.3	Ao	2	..	44428b
34	1829	47.8	+2 54	9.4	10.5	K2	1	..	15244b	84	4646	48.0	-28 2	9.7	9.2	F8	3	..	44428b
35	2280	47.8	-5 10	5.75	6.09	F2	7	..	18560b	85	5045	48.0	-29 35	9.5	9.5	Ao	1	..	44428b
36	2344	47.8	-6 56	9.2	9.3	A3	2	..	44419b	86	3703	48.0	-40 3	9.5	9.2	Ao	4	..	18435b
37	2136	47.8	-11 40	9.0	10.0	Ko	3	E	15262b	87	3601	48.0	-42 51	6.38	6.5	B3	5	2.6	42928b
38	2250	47.8	-14 36	5.69	6.03	F2	7	2.10	2399b	88	3360	48.0	-47 58	11.5	9.8	B9	2	..	18300b
39	2251	47.8	-15 4	8.56	9.06	F8	3	..	18976b	89	3110	48.0	-49 8	9.4	9.8	G5	1	..	18300b
40	2153	47.8	-21 34	9.2	9.0	B9	2	..	44381b	90	1614	48.1	+33 50	9.5	9.5	Ao	1	..	37448i
41	6375	47.8	-23 21	10.9	9.3	A2	2	..	44381b	91	1708	48.1	+10 57	7.7	8.5	G5	2	..	37553i
42	6377	47.8	-23 38	9.7	9.8	Ko	1	..	44381b	92	2115	48.1	+0 6	8.7	9.3	Go	1	..	15244b
43	5110	47.8	-27 3	9.7	9.5	Ko	2	..	44428b	93	2126	48.1	-4 37	9.1	10.3	K5	1	..	44419b
44	5041	47.8	-30 4	7.94	8.6	Ko	4	..	42909b	94	2102	48.1	-15 10	7.51	7.49	B9	7	..	18976b
45	4228	47.8	-33 50	9.3	8.9	A	2	..	42909b	95	2169	48.1	-16 51	9.1	9.1	Ao	3	..	18976b
46	4017	47.8	-34 42	8.6	8.4	A2	5	..	18435b	96	2246	48.1	-20 32	9.4	9.8	K5	3	..	44433b
47	3557	47.8	-40 58	8.7	9.4	K5	2	..	18289b	97	2247	48.1	-21 0	9.1	9.3	G5	2	..	44433b
48	3484	47.8	-46 4	9.0	8.2	Ao	6	..	20786b	98	2155	48.1	-21 45	8.7	8.7	B5	3	..	44381b
49	3244	47.8	-48 18	7.8	7.4	Ao	3	2.8	8952b	99	2058	48.1	-23 3	10.2	9.8	Ao	1	..	44381b
50	1097	47.9	+59 56	7.81	8.23	F5	5	..	37676i	100	5196	48.1	-25 41	10.0	9.0	Fo	4	0.2	44428b

## THE HENRY DRAPER CATALOGUE.

64300

7<sup>h</sup> 48<sup>m</sup>.1

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	5165	48.1	-31 23	8.0	8.1	B9	7	..	42909b	51	1714	48.4	+21 22	7.01	8.36	Ma	5	0,4-	37605i
2	3472	48.1	-41 43	10.8	10.1	A2	1	..	18289b	52	1697	48.4	+15 11	8.3	8.6	Fo	6	..	37552i
3	3656	48.1	-43 31	8.5	8.2	Ao	5	..	20785b	53	1805	48.4	+9 16	7.6	8.7	K2	2	..	20709b
4	3362	48.1	-47 41	7.7	8.7	Ko	5	..	20786b	54	2116	48.4	+0 3	9.08	10.08	Ko	1	..	15244b
5	3247	48.1	-48 35	9.6	9.3	Ao	3	..	18300b	55	2347	48.4	-6 42	9.0	9.0	Ao	1	..	38629i
6	1008	48.1	-58 20	8.4	8.7	B9	4	..	12757b	56	2277	48.4	-13 48	8.1	9.1	Ko	4	..	18976b
7	338	48.2	+74 11	5.56	6.56	Ko	9	..	37559i	57	2205	48.4	-17 15	9.1	9.1	Ao	4	..	18976b
8	1252	48.2	+56 22	9.5	9.9	F5	2	..	37409i	58	2159	48.4	-21 58	7.5	8.9	K2	2	..	44381b
9	1782	48.2	+42 14	7.8	7.9	A2	5	3,7	37704i	59	5198	48.4	-25 30	10.4	9.3	Fo	2	..	44433b
10	1835	48.2	+38 6	8.5	8.9	F5	4	..	37448i	60	5122	48.4	-26 52	10.0	9.8	K5	2	..	44428b
11	1847	48.2	+4 20	9.4	9.4	Ao	2	..	37560i	61	5057	48.4	-29 23	9.7	8.9	Ao	3	..	44428b
12	2238	48.2	-7 9	8.6	8.6	Ao	1	..	38629i	62	5212	48.4	-30 35	9.3	9.5	G5	1	..	44428b
13	2274	48.2	-13 38	8.5	9.5	Ko	2	..	18976b	63	5168	48.4	-31 14	9.0	9.2	B9	3	..	42909b
14	6388	48.2	-23 28	10.2	9.8	G5	1	..	44433b	64	3744	48.4	-38 39	8.1	8.1	F5	5	..	18435b
15	5115	48.2	-26 10	8.5	8.9	B	3	..	44428b	65	3610	48.4	-42 38	6.16	6.0	B5	5	0,6-	42977b
16	3706	48.2	-39 48	8.3	8.9	F5	6	..	18435b	66	3494	48.4	-46 27	9.1	8.7	Ao	6	..	20786b
17	3505	48.2	-45 27	9.6	9.9	Ko	2	..	18300b	67	3366	48.4	-47 57	10.0	10.5	K5	1	..	18300b
18	3491	48.2	-46 58	6.58	6.7	B3	..	0,7-	28,201	68	1409	48.4	-55 1	9.1	9.2	A2	4	..	24589b
19	1447	48.2	-56 4	8.7	8.9	F2	5	E	24589b	69	896	48.4	-60 25	8.3	8.7	B9	4	..	15516b
20	910	48.2	-59 48	6.66	8.1	Ko	8	..	15516b	70	821	48.4	-67 12	8.5	9.6	K2	3	..	15274b
21	241	48.3	+79 54	8.25	9.03	G5	3	..	38331i	71	964	48.5	+62 15	9.4	9.7	F	1	..	37676i
22	1747	48.3	+43 44	9.2	10.2	Ko	1	..	37463i	72	1601	48.5	+30 37	7.80	8.58	G5	4	..	37569i
23	1958	48.3	+39 57	7.62	7.68	A2	7	..	37463i	73	1675	48.5	+26 18	9.1	10.3	K5	1	..	37503i
24	1705	48.3	+34 52	7.72	8.28	Go	5	..	37569i	74	1824	48.5	+5 40	8.3	8.3	Ao	3	..	20709b
25	1615	48.3	+33 24	8.6	9.2	Go	3	..	37569i	75	2128	48.5	-4 11	10.1	10.1	Ao	1	..	44419b
26	1690	48.3	+31 15	8.7	9.0	Fo	3	..	37569i	76	2143	48.5	-11 51	9.1	9.9	G5	2	E	15262b
27	1840	48.3	+23 46	8.7	9.8	K2	2	..	37503i	77	2258	48.5	-14 46	9.1	9.5	F5	3	..	18976b
28	1939	48.3	+20 26	9.5	9.8	Fo	2	..	37503i	78	2208	48.5	-17 58	10.1	10.1	B9	2	..	18976b
29	1773	48.3	+18 47	9.2	10.2	K	1	..	37552i	79	4036	48.5	-34 28	5.02	6.0	F2	..	0,6-	56,124
30	1580	48.3	+16 18	7.08	7.14	A2	7	..	37552i	80	3967	48.5	-35 48	9.3	8.7	A2	4	..	18435b
31	2127	48.3	-4 33	9.4	9.5	A2	1	..	44419b	81	3478	48.5	-41 44	9.9	9.8	F5	2	..	18289b
32	2141	48.3	-11 22	8.1	9.5	Mbp	4	R	44419b	82	3253	48.5	-48 51	8.4	8.6	Ao	4	..	20786b
33	2105	48.3	-15 13	8.40	9.47	K2	2	..	18976b	83	898	48.5	-60 58	8.3	9.0	K2	3	..	15516b
34	2203	48.3	-17 10	9.6	9.6	B9	2	..	18976b	84	1013	48.6	+61 35	9.0	9.4	F5	1	..	37676i
35	2108	48.3	-19 24	8.3	8.7	A3	5	..	18976b	85	1489	48.6	+50 48	8.5	9.3	G5	1	..	38188i
36	2106	48.3	-19 32	7.9	8.3	B8	8	..	18976b	86	1961	48.6	+40 37	8.4	8.8	F5	3	..	37463i
37	2156	48.3	-21 9	8.7	9.2	Go	3	..	44381b	87	1836	48.6	+38 28	8.0	9.0	Ko	3	..	37448i
38	2059	48.3	-22 26	8.7	9.5	F5	2	..	44381b	88	1799	48.6	+37 27	7.8	8.1	Fo	5	..	37569i
39	6093	48.3	-24 40	8.9	8.1	Ao	6	..	44381b	89	1644	48.6	+32 34	8.0	8.4	F5	6	..	37569i
40	5001	48.3	-29 0	9.2	9.8	Ko	1	..	44428b	90	1790	48.6	+13 51	8.1	8.7	Go	3	..	37552i
41	4239	48.3	-33 42	8.6	8.6	Go	3	..	42909b	91	1791	48.6	+13 41	7.7	8.5	G5	6	..	37552i
42	3476	48.3	-41 18	10.6	9.8	A	2	E	18289b	92	1935	48.6	+1 12	8.7	9.7	Ko	1	..	37560i
43	3792	48.3	-45 2	9.84	9.9	A2	2	..	18300b	93	2129	48.6	-4 33	9.1	10.2	K2	1	..	44419b
44	3251	48.3	-48 22	9.1	10.1	Ko	1	..	18300b	94	2260	48.6	-14 46	9.0	10.0	Ko	1	..	18976b
45	1363	48.3	-55 20	9.0	8.9	F5	3	..	24598b	95	2173	48.6	-16 55	9.2	9.2	B9	4	..	18976b
46	1364	48.3	-55 24	8.7	8.9	Ko	3	..	24589b	96	2111	48.6	-19 10	9.6	9.3	Ao	2	..	18976b
47	1253	48.4	+56 46	6.49	6.49	Ao	8	..	37676i	97	2251	48.6	-20 45	8.7	8.9	Ao	3	..	18976b
48	1182	48.4	+54 0	9.2	9.5	Fo	1	..	38188i	98	2160	48.6	-21 10	9.8	9.8	F5	2	..	44381b
49	1684	48.4	+49 33	8.9	9.5	Go	1	..	38188i	99	6101	48.6	-24 51	8.9	8.3	B2	5	..	44381b
50	1673	48.4	+26 26	8.6	9.7	K2	3	..	37503i	100	4666	48.6	-27 43	9.3	9.2	B8	3	..	44428b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

64400

7<sup>h</sup> 48<sup>m</sup>.6

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	5064	48.6	-29 30	9.2	9.2	B9	2	..	44428b	51	2284	48.9	-5 49	7.7	7.7	A0	4	..	38629i
2	3993	48.6	-37 33	9.7	9.0	F5	2	..	18435b	52	2128	48.9	-8 58	8.3	8.3	B9	2	..	38629i
3	3480	48.6	-41 32	7.4	8.9	K2	4	..	18289b	53	2162	48.9	-21 59	9.1	9.8	K2	1	..	44381b
4	3513	48.6	-45 9	9.24	9.8	K0	2	..	18300b	54	6108	48.9	-24 59	8.70	9.3	K2	2	..	44381b
5	3256	48.6	-48 36	10.2	10.0	A0	1	..	18300b	55	5137	48.9	-26 9	7.8	7.7	B8	9	..	44428b
6	3257	48.6	-48 47	8.4	8.9	F5	3	..	20786b	56	5017	48.9	-28 59	9.7	9.3	A5	3	..	44428b
7	3012	48.6	-50 11	8.59	9.5	K5	3	E	24598b	57	3488	48.9	-41 23	10.8	10.1	A0	2	..	18289b
8	1306	48.6	-52 23	9.4	10.0	Go	2	..	24598b	58	3486	48.9	-42 4	7.9	7.3	B8	5	2,2	8897b
9	471	48.6	-73 50	8.0	8.0	A0	7	..	22237b	59	3672	48.9	-43 24	10.5	10.2	K0	2	..	18289b
10	515	48.7	+67 34	8.8	10.0	K5	1	..	37713i	60	3670	48.9	-43 34	11.5	9.4	A2	3	..	18289b
11	1124	48.7	+59 45	8.96	9.74	G5	2	..	37409i	61	3499	48.9	-47 0	10.2	9.6	A0	3	..	18300b
12	1254	48.7	+56 30	8.7	9.3	Go	2	..	37409i	62	3260	48.9	-48 30	9.6	9.3	F8	2	..	18300b
13	2119	48.7	+0 35	8.1	9.1	K0	2	..	37560i	63	1449	48.9	-53 32	8.4	9.2	K0	6	..	24589b
14	2270	48.7	-9 42	9.0	9.1	A2	3	..	44419b	64	1448	48.9	-54 3	10.1	10.1	A0	4	..	24589b
15	2113	48.7	-19 23	9.4	9.3	A2	2	..	18976b	65	474	48.9	-76 6	9.9	10.5	Go	4	..	20652b
16	2253	48.7	-20 49	9.4	9.3	A3	2	2,1	44433b	66	222	49.0	+82 41	9.4	9.4	A	2	..	37546i
17	2254	48.7	-21 6	9.2	9.0	A0	3	..	44381b	67	1500	49.0	+28 39	7.23	7.65	F5	6	..	37569i
18	2161	48.7	-22 7	9.6	9.3	B3	3	..	44433b	68	1869	49.0	+19 31	7.9	9.0	K2	5	..	37552i
19	5208	48.7	-25 27	7.9	8.6	K0	4	..	44381b	69	1828	49.0	+4 57	9.21	9.27	A2	1	..	37560i
20	5008	48.7	-28 29	10.0	9.2	B9	2	..	44428b	70	1938	49.0	+1 50	10.4	10.5	A5	2	..	15244b
21	5218	48.7	-30 13	8.50	8.1	A0	4	..	42909b	71	1936	49.0	+1 21	9.0	9.0	A0	3	..	38370i
22	3483	48.7	-41 38	10.3	10.1	A0	1	..	18289b	72	2121	49.0	+0 9	9.0	9.8	G5	2	..	15244b
23	3258	48.7	-48 12	10.0	9.8	A5	2	..	18300b	73	2111	49.0	-4 3	8.3	9.7	Ma	2	..	15262b
24	1410	48.7	-54 8	10.0	10.1	A2	2	..	24589b	74	2150	49.0	-12 0	8.3	8.9	Go	3	..	12673b
25	1366	48.7	-55 20	9.4	10.4	K0	2	..	24589b	75	2119	49.0	-19 8	9.2	8.9	A0	3	..	18976b
26	826	48.7	-65 34	8.8	9.8	K0	2	..	15274b	76	6109	49.0	-24 20	9.2	8.7	B8	4	..	44381b
27	1255	48.8	+56 16	8.6	9.7	K2	1	..	37409i	77	5211	49.0	-25 27	10.4	9.2	F2	1	..	44429b
28	1748	48.8	+43 34	9.4	10.2	G5	1	..	37463i	78	4679	49.0	-27 44	10.2	9.3	A0	3	..	44428b
29	1849	48.8	+4 0	8.3	8.3	A0	4	..	37560i	79	4678	49.0	-27 54	10.7	9.2	B9	3	..	44428b
30	2133	48.8	-4 9	8.5	8.6	A2	4	..	15262b	80	5076	49.0	-29 6	9.7	9.5	G5	2	..	44428b
31	2132	48.8	-4 27	9.2	9.6	F5	2	..	44419b	81	5225	49.0	-30 51	9.3	9.8	K2	2	..	44428b
32	2110	48.8	-15 36	8.1	8.1	B9	5	..	18976b	82	3490	49.0	-41 13	10.6	9.8	A0	2	..	18289b
33	2175	48.8	-16 34	8.7	9.7	K0	2	..	18976b	83	3675	49.0	-43 40	9.4	9.4	K2	3	..	18289b
34	2062	48.8	-22 53	9.2	9.8	K0	1	..	44381b	84	827	49.0	-65 57	5.94	6.1	B9	..	0,9	56,124
35	6405	48.8	-23 44	11.6	9.6	A2	1	..	44433b	85	826	49.0	-67 51	8.5	9.0	F8	4	..	15274b
36	5209	48.8	-25 15	10.4	9.0	A0	2	..	44381b	86	265	49.1	+79 45	5.33	5.33	A0	..	..	56,85
37	4674	48.8	-27 56	9.7	9.8	K5	1	..	44428b	87	321	49.1	+75 43	8.02	8.80	G5	4	..	37559i
38	5015	48.8	-28 32	10.2	9.2	B9	3	..	44428b	88	2031	49.1	+39 33	7.14	7.20	A2	9	..	37463i
39	5174	48.8	-31 52	7.9	8.6	K0	3	..	42909b	89	1711	49.1	+36 46	8.0	8.6	Go	5	..	37448i
40	3579	48.8	-40 19	3.76	5.8	G5	..	0, R	28,201	90	1712	49.1	+36 13	8.6	9.4	G5	2	..	37448i
41	3617	48.8	-42 4	8.6	7.7	B8	3	..	8897b	91	1705	49.1	+35 41	6.11	6.11	A0	9	..	37569i
42	3516	48.8	-45 43	10.9	9.6	F8	3	..	18300b	92	1501	49.1	+27 21	9.0	9.8	G5	2	E	37569i
43	3013	48.8	-50 18	9.2	9.5	K0	3	E	24598b	93	1778	49.1	+18 21	7.43	8.50	K2	5	..	37552i
44	329	48.8	-77 41	10.0	10.8	G5	3	..	20652b	94	1700	49.1	+15 41	8.3	9.1	G5	3	..	37552i
45	1507	48.9	+45 48	9.2	9.8	Go	3	..	37704i	95	2244	49.1	-7 32	9.1	9.2	A2	3	..	44419b
46	1964	48.9	+40 34	7.8	8.8	K0	3	..	37463i	96	2152	49.1	-12 2	9.0	9.1	A3	2	..	12673b
47	1800	48.9	+37 14	8.0	9.0	K0	4	..	37448i	97	2284	49.1	-13 21	8.3	9.7	Ma	..	..	M
48	1800	48.9	+24 27	8.4	8.5	A5	3	..	37503i	98	2180	49.1	-16 36	8.1	9.1	K0	4	..	18976b
49	1807	48.9	+9 32	9.4	9.4	A0	1	..	20709b	99	5021	49.1	-28 15	9.2	9.5	K0	2	..	44428b
50	1818	48.9	+2 39	8.3	8.3	A	7	R	15244b	100	5023	49.1	-28 16	10.0	9.5	Go	1	..	44428b

THE HENRY DRAPER CATALOGUE.

64500

JOHN G. WOLBACH LIBRARY  
HARVARD COLLEGE OBSERVATORY  
CAMBRIDGE, MASS. 02138  
7h 49m

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	3981	49.1	-36 40	7.9	8.9	Ko	2	0,3	8897b	51	3812	49.3	-44 34	9.6	9.3	Ao	2	..	18289b
2	4003	49.1	-37 43	8.6	9.2	G5	3	..	18435b	52	3269	49.3	-48 6	9.6	9.5	F8	2	..	18300b
3	3769	49.1	-38 36	4.53	4.36	B3	..	R	28,201	53	2733	49.3	-51 48	10.2	9.8	A2	2	E	24598b
4	3719	49.1	-39 23	9.9	9.8	G5	2	..	18435b	54	1309	49.3	-52 6	10.0	10.0	A	2	..	24598b
5	3621	49.1	-42 24	9.6	8.6	B9	7	0,3	18289b	55	242	49.4	+80 30	9.0	9.8	G5	2	..	37493i
6	1451	49.1	-53 54	10.0	11.0	Ko	1	..	24589b	56	1687	49.4	+49 50	8.22	9.00	G5	2	..	38188i
7	916	49.1	-59 24	7.1	7.3	B9	3	0,8	42171b	57	1690	49.4	+44 26	8.9	9.9	Ko	1	..	37463i
8	469	49.1	-74 22	10.2	10.2	A	1	..	22237b	58	1710	49.4	+34 42	8.2	8.8	Go	3	..	37448i
9	1608	49.2	+30 50	8.6	9.4	G5	2	..	37569i	59	1610	49.4	+30 39	8.5	9.1	Go	3	..	37569i
10	1645	49.2	+29 25	8.4	9.0	Go	4	..	37569i	60	1609	49.4	+30 7	8.6	8.7	A5	4	..	37569i
11	1807	49.2	+22 16	var.	var.	Con.	..	R	56,200	61	1939	49.4	+1 49	8.3	8.4	A3	4	1,4	38370i
12	1779	49.2	+18 13	7.5	8.5	Ko	3	..	37552i	62	2135	49.4	-4 16	8.9	9.0	A2	4	..	15262b
13	1829	49.2	+5 47	7.9	7.9	B9	4	..	37553i	63	2288	49.4	-5 29	10.1	10.2	A2	1	..	44419b
14	2287	49.2	-5 38	9.8	10.1	Fo	1	..	44419b	64	2164	49.4	-21 40	8.4	8.3	Ao	5	..	44381b
15	2130	49.2	-9 4	7.7	8.7	Ko	2	..	38629i	65	2066	49.4	-22 56	7.09	7.3	B9	8	1,2	44381b
16	2278	49.2	-10 18	7.71	8.78	K2	5	3,2	44419b	66	2065	49.4	-23 3	6.71	6.8	Ao	2	..	8911b
17	6420	49.2	-23 55	9.0	10.1	A2	4	..	44381b	67	5227	49.4	-25 41	10.7	9.2	B9	2	..	44429b
18	4682	49.2	-27 23	10.4	9.2	A2	4	..	44428b	68	5228	49.4	-25 58	9.7	8.9	B	3	R	44433b
19	4683	49.2	-27 42	10.4	9.0	Ao	3	..	44428b	69	5155	49.4	-27 2	8.3	7.7	B8	8	..	44428b
20	4516	49.2	-33 3	7.7	7.4	Ao	6	..	42909b	70	4264	49.4	-33 47	7.30	8.6	K2	3	..	42909b
21	3583	49.2	-40 31	9.9	9.8	G5	1	..	18289b	71	4053	49.4	-34 41	6.62	7.3	Go	7	5,3	42909b
22	3496	49.2	-41 38	10.8	9.8	Ao	2	..	18289b	72	3989	49.4	-36 6	5.46	6.2	Ko	..	0,8	56,124
23	3497	49.2	-42 0	9.9	10.5	Ma	1	..	18289b	73	3777	49.4	-38 33	9.2	9.2	B9	3	..	18435b
24	3809	49.2	-44 9	9.8	9.6	Ao	2	..	18289b	74	3684	49.4	-43 45	10.9	10.3	F	3	..	18289b
25	3522	49.2	-45 29	9.6	9.3	Ao	4	..	18300b	75	3815	49.4	-44 7	9.4	9.6	G5	2	..	18289b
26	3264	49.2	-48 37	8.3	8.1	B9	7	..	20786b	76	3506	49.4	-46 50	10.0	10.5	K5	1	..	18300b
27	3265	49.2	-49 0	9.8	9.5	A2	2	..	18300b	77	3384	49.4	-47 8	8.6	8.2	Ao	6	..	20786b
28	1454	49.2	-53 6	9.1	9.6	Go	2	..	24589b	78	3270	49.4	-48 26	9.0	8.4	B9	6	..	20786b
29	1011	49.2	-58 56	8.9	9.9	Ko	1	..	40088b	79	3271	49.4	-48 52	9.6	9.8	F8	2	..	18300b
30	821	49.2	-63 53	8.9	8.9	Ao	4	..	15274b	80	3128	49.4	-49 51	8.5	9.0	G5	4	E	24598b
31	531	49.3	+65 59	9.4	10.2	G5	1	..	37713i	81	1457	49.4	-53 4	9.0	9.2	Ao	4	..	24589b
32	1100	49.3	+60 20	8.6	8.9	F2	3	..	37676i	82	1416	49.4	-54 34	8.7	9.5	Ko	4	..	24589b
33	1965	49.3	+40 44	9.1	10.3	K5	1	..	37463i	83	1802	49.5	+24 37	8.2	8.3	A2	3	..	37503i
34	1714	49.3	+36 15	8.7	9.0	Fo	3	..	37448i	84	1712	49.5	+12 50	7.13	8.13	Ko	5	..	37553i
35	1808	49.3	+21 56	8.46	8.54	A3	3	E	37605i	85	1862	49.5	+7 11	8.2	8.3	A3	3	..	37553i
36	1656	49.3	+10 7	8.82	9.32	F8	1	..	20709b	86	1942	49.5	+1 8	9.7	9.7	Ao	2	..	15244b
37	1861	49.3	+7 26	8.7	9.5	G5	1	..	20709b	87	2132	49.5	-8 32	10.2	10.2	Ao	2	..	44419b
38	1819	49.3	+2 16	9.7	10.0	F2	1	..	15244b	88	2155	49.5	-11 40	9.6	9.7	A2	3	E	15262b
39	2112	49.3	-3 3	7.7	7.8	A3	5	..	38370i	89	2216	49.5	-17 38	9.4	9.4	A	1	..	18976b
40	2279	49.3	-10 53	8.5	9.5	Ko	3	..	15262b	90	6428	49.5	-24 0	9.0	8.1	B9	5	..	44381b
41	2072	49.3	-18 40	9.2	9.7	F8	2	..	18976b	91	5232	49.5	-25 9	9.45	9.2	Go	2	..	44381b
42	2123	49.3	-19 16	8.7	8.6	B9	4	..	18976b	92	5156	49.5	-26 11	10.0	9.2	Ao	2	..	44428b
43	2258	49.3	-20 40	9.4	10.1	K5	1	..	44433b	93	4689	49.5	-27 12	8.9	9.2	G5	6	..	44428b
44	5221	49.3	-25 49	10.0	9.2	F5	3	..	44433b	94	5035	49.5	-28 58	8.5	9.0	Ko	5	..	44428b
45	5232	49.3	-30 36	9.2	9.5	Go	1	..	42909b	95	5088	49.5	-29 34	7.8	8.0	Fo	7	..	44428b
46	5183	49.3	-31 33	7.46	8.7	K2	4	..	42909b	96	3509	49.5	-46 13	9.8	9.1	B5	4	..	18300b
47	4006	49.3	-37 30	8.9	9.0	A5	4	..	18435b	97	3508	49.5	-46 58	9.0	9.0	Go	3	..	20786b
48	3585	49.3	-40 18	9.9	9.2	Ao	3	..	18289b	98	3272	49.5	-48 8	10.2	9.3	Ao	3	..	20786b
49	3588	49.3	-41 4	8.6	9.5	Ko	4	..	18289b	99	3130	49.5	-49 35	8.8	8.6	A2	5	E	24598b
50	3682	49.3	-43 40	11.5	10.2	A	1	..	18289b	100	393	49.6	+73 25	9.2	10.0	G5	2	..	38187i

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

64400

7<sup>h</sup> 48<sup>m</sup>.6

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	5064	48.6	-29 30	9.2	9.2	B9	2	..	44428b	51	2284	48.9	-5 49	7.7	7.7	A0	4	..	38629i
2	3993	48.6	-37 33	9.7	9.0	F5	2	..	18435b	52	2128	48.9	-8 58	8.3	8.3	B9	2	..	38629i
3	3480	48.6	-41 32	7.4	8.9	K2	4	..	18289b	53	2162	48.9	-21 59	9.1	9.8	K2	1	..	44381b
4	3513	48.6	-45 9	9.24	9.8	K0	2	..	18300b	54	6108	48.9	-24 59	8.70	9.3	K2	2	..	44381b
5	3256	48.6	-48 36	10.2	10.0	A0	1	..	18300b	55	5137	48.9	-26 9	7.8	7.7	B8	9	..	44428b
6	3257	48.6	-48 47	8.4	8.9	F5	3	..	20786b	56	5017	48.9	-28 59	9.7	9.3	A5	3	..	44428b
7	3012	48.6	-50 11	8.59	9.5	K5	3	E	24598b	57	3488	48.9	-41 23	10.8	10.1	A0	2	..	18289b
8	1306	48.6	-52 23	9.4	10.0	Go	2	..	24598b	58	3486	48.9	-42 4	7.9	7.3	B8	5	2,2	8897b
9	471	48.6	-73 50	8.0	8.0	A0	7	..	22237b	59	3672	48.9	-43 24	10.5	10.2	K0	2	..	18289b
10	515	48.7	+67 34	8.8	10.0	K5	1	..	37713i	60	3670	48.9	-43 34	11.5	9.4	A2	3	..	18289b
11	1124	48.7	+59 45	8.96	9.74	G5	2	..	37409i	61	3499	48.9	-47 0	10.2	9.6	A0	3	..	18300b
12	1254	48.7	+56 30	8.7	9.3	Go	2	..	37409i	62	3260	48.9	-48 30	9.6	9.3	F8	2	..	18300b
13	2119	48.7	+0 35	8.1	9.1	K0	2	..	37560i	63	1449	48.9	-53 32	8.4	9.2	K0	6	..	24589b
14	2270	48.7	-9 42	9.0	9.1	A2	3	..	44419b	64	1448	48.9	-54 3	10.1	10.1	A0	4	..	24589b
15	2113	48.7	-19 23	9.4	9.3	A2	2	..	18976b	65	474	48.9	-76 6	9.9	10.5	Go	4	..	20652b
16	2253	48.7	-20 49	9.4	9.3	A3	2	2,1	44433b	66	222	49.0	+82 41	9.4	9.4	A	2	..	37546i
17	2254	48.7	-21 6	9.2	9.0	A0	3	..	44381b	67	1500	49.0	+28 39	7.23	7.65	F5	6	..	37569i
18	2161	48.7	-22 7	9.6	9.3	B3	3	..	44433b	68	1869	49.0	+19 31	7.9	9.0	K2	5	..	37552i
19	5208	48.7	-25 27	7.9	8.6	K0	4	..	44381b	69	1828	49.0	+4 57	9.21	9.27	A2	1	..	37560i
20	5008	48.7	-28 29	10.0	9.2	B9	2	..	44428b	70	1938	49.0	+1 50	10.4	10.5	A5	2	..	15244b
21	5218	48.7	-30 13	8.50	8.1	A0	4	..	42909b	71	1936	49.0	+1 21	9.0	9.0	A0	3	..	38370i
22	3483	48.7	-41 38	10.3	10.1	A0	1	..	18289b	72	2121	49.0	+0 9	9.0	9.8	G5	2	..	15244b
23	3258	48.7	-48 12	10.0	9.8	A5	2	..	18300b	73	2111	49.0	-4 3	8.3	9.7	Ma	2	..	15262b
24	1410	48.7	-54 8	10.0	10.1	A2	2	..	24589b	74	2150	49.0	-12 0	8.3	8.9	Go	3	..	12673b
25	1366	48.7	-55 20	9.4	10.4	K0	2	..	24589b	75	2119	49.0	-19 8	9.2	8.9	A0	3	..	18976b
26	826	48.7	-65 34	8.8	9.8	K0	2	..	15274b	76	6109	49.0	-24 20	9.2	8.7	B8	4	..	44381b
27	1255	48.8	+56 16	8.6	9.7	K2	1	..	37409i	77	5211	49.0	-25 27	10.4	9.2	F2	1	..	44429b
28	1748	48.8	+43 34	9.4	10.2	G5	1	..	37463i	78	4679	49.0	-27 44	10.2	9.3	A0	3	..	44428b
29	1849	48.8	+4 0	8.3	8.3	A0	4	..	37560i	79	4678	49.0	-27 54	10.7	9.2	B9	3	..	44428b
30	2133	48.8	-4 9	8.5	8.6	A2	4	..	15262b	80	5076	49.0	-29 6	9.7	9.5	G5	2	..	44428b
31	2132	48.8	-4 27	9.2	9.6	F5	2	..	44419b	81	5225	49.0	-30 51	9.3	9.8	K2	2	..	44428b
32	2110	48.8	-15 36	8.1	8.1	B9	5	..	18976b	82	3490	49.0	-41 13	10.6	9.8	A0	2	..	18289b
33	2175	48.8	-16 34	8.7	9.7	K0	2	..	18976b	83	3675	49.0	-43 40	9.4	9.4	K2	3	..	18289b
34	2062	48.8	-22 53	9.2	9.8	K0	1	..	44381b	84	827	49.0	-65 57	5.94	6.1	B9	..	0,9	56,124
35	6405	48.8	-23 44	11.6	9.6	A2	1	..	44433b	85	826	49.0	-67 51	8.5	9.0	F8	4	..	15274b
36	5209	48.8	-25 15	10.4	9.0	A0	2	..	44381b	86	265	49.1	+79 45	5.33	5.33	A0	..	..	56,85
37	4674	48.8	-27 56	9.7	9.8	K5	1	..	44428b	87	321	49.1	+75 43	8.02	8.80	G5	4	..	37559i
38	5015	48.8	-28 32	10.2	9.2	B9	3	..	44428b	88	2031	49.1	+39 33	7.14	7.20	A2	9	..	37463i
39	5174	48.8	-31 52	7.9	8.6	K0	3	..	42909b	89	1711	49.1	+36 46	8.0	8.6	Go	5	..	37448i
40	3579	48.8	-40 19	3.76	5.8	G5	..	0, R	28,201	90	1712	49.1	+36 13	8.6	9.4	G5	2	..	37448i
41	3617	48.8	-42 4	8.6	7.7	B8	3	..	8897b	91	1705	49.1	+35 41	6.11	6.11	A0	9	..	37569i
42	3516	48.8	-45 43	10.9	9.6	F8	3	..	18300b	92	1501	49.1	+27 21	9.0	9.8	G5	2	E	37569i
43	3013	48.8	-50 18	9.2	9.5	K0	3	E	24598b	93	1778	49.1	+18 21	7.43	8.50	K2	5	..	37552i
44	329	48.8	-77 41	10.0	10.8	G5	3	..	20652b	94	1700	49.1	+15 41	8.3	9.1	G5	3	..	37552i
45	1507	48.9	+45 48	9.2	9.8	Go	3	..	37704i	95	2244	49.1	-7 32	9.1	9.2	A2	3	..	44419b
46	1964	48.9	+40 34	7.8	8.8	K0	3	..	37463i	96	2152	49.1	-12 2	9.0	9.1	A3	2	..	12673b
47	1800	48.9	+37 14	8.0	9.0	K0	4	..	37448i	97	2284	49.1	-13 21	8.3	9.7	Ma	..	..	M
48	1800	48.9	+24 27	8.4	8.5	A5	3	..	37503i	98	2180	49.1	-16 36	8.1	9.1	K0	4	..	18976b
49	1807	48.9	+9 32	9.4	9.4	A0	1	..	20709b	99	5021	49.1	-28 15	9.2	9.5	K0	2	..	44428b
50	1818	48.9	+2 39	8.3	8.3	A	7	R	15244b	100	5023	49.1	-28 16	10.0	9.5	Go	1	..	44428b

THE HENRY DRAPER CATALOGUE.

64500

7<sup>h</sup> 49<sup>m</sup>.4<sup>s</sup>

JOHN G. WOLBACH LIBRARY  
HARVARD COLLEGE OBSERVATORY  
CAMBRIDGE, MASS. 02138

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	3981	49.1	-36 40	7.9	8.9	Ko	2	0,3	8897b	51	3812	49.3	-44 34	9.6	9.3	Ao	2	..	18289b
2	4003	49.1	-37 43	8.6	9.2	G5	3	..	18435b	52	3269	49.3	-48 6	9.6	9.5	F8	2	..	18300b
3	3769	49.1	-38 36	4.53	4.36	B3	..	R	28,201	53	2733	49.3	-51 48	10.2	9.8	A2	2	E	24598b
4	3719	49.1	-39 23	9.9	9.8	G5	2	..	18435b	54	1309	49.3	-52 6	10.0	10.0	A	2	..	24598b
5	3621	49.1	-42 24	9.6	8.6	B9	7	0,3	18289b	55	242	49.4	+80 30	9.0	9.8	G5	2	..	37493i
6	1451	49.1	-53 54	10.0	11.0	Ko	1	..	24589b	56	1687	49.4	+49 50	8.22	9.00	G5	2	..	38188i
7	916	49.1	-59 24	7.1	7.3	B9	3	0,8	42171b	57	1690	49.4	+44 26	8.9	9.9	Ko	1	..	37463i
8	469	49.1	-74 22	10.2	10.2	A	1	..	22237b	58	1710	49.4	+34 42	8.2	8.8	Go	3	..	37448i
9	1608	49.2	+30 50	8.6	9.4	G5	2	..	37569i	59	1610	49.4	+30 39	8.5	9.1	Go	3	..	37569i
10	1645	49.2	+29 25	8.4	9.0	Go	4	..	37569i	60	1609	49.4	+30 7	8.6	8.7	A5	4	..	37569i
11	1807	49.2	+22 16	var.	var.	Con.	..	R	56,200	61	1939	49.4	+1 49	8.3	8.4	A3	4	1,4	38370i
12	1779	49.2	+18 13	7.5	8.5	Ko	3	..	37552i	62	2135	49.4	-4 16	8.9	9.0	A2	4	..	15262b
13	1829	49.2	+5 47	7.9	7.9	B9	4	..	37553i	63	2288	49.4	-5 29	10.1	10.2	A2	1	..	44419b
14	2287	49.2	-5 38	9.8	10.1	Fo	1	..	44419b	64	2164	49.4	-21 40	8.4	8.3	Ao	5	..	44381b
15	2130	49.2	-9 4	7.7	8.7	Ko	2	..	38629i	65	2066	49.4	-22 56	7.09	7.3	B9	8	1,2	44381b
16	2278	49.2	-10 18	7.71	8.78	K2	5	3,2	44419b	66	2065	49.4	-23 3	6.71	6.8	Ao	2	..	8911b
17	6420	49.2	-23 55	9.0	10.1	A2	4	..	44381b	67	5227	49.4	-25 41	10.7	9.2	B9	2	..	44429b
18	4682	49.2	-27 23	10.4	9.2	A2	4	..	44428b	68	5228	49.4	-25 58	9.7	8.9	B	3	R	44433b
19	4683	49.2	-27 42	10.4	9.0	Ao	3	..	44428b	69	5155	49.4	-27 2	8.3	7.7	B8	8	..	44428b
20	4516	49.2	-33 3	7.7	7.4	Ao	6	..	42909b	70	4264	49.4	-33 47	7.30	8.6	K2	3	..	42909b
21	3583	49.2	-40 31	9.9	9.8	G5	1	..	18289b	71	4053	49.4	-34 41	6.62	7.3	Go	7	5,3	42909b
22	3496	49.2	-41 38	10.8	9.8	Ao	2	..	18289b	72	3989	49.4	-36 6	5.46	6.2	Ko	..	0,8	56,124
23	3497	49.2	-42 0	9.9	10.5	Ma	1	..	18289b	73	3777	49.4	-38 33	9.2	9.2	B9	3	..	18435b
24	3809	49.2	-44 9	9.8	9.6	Ao	2	..	18289b	74	3684	49.4	-43 45	10.9	10.3	F	3	..	18289b
25	3522	49.2	-45 29	9.6	9.3	Ao	4	..	18300b	75	3815	49.4	-44 7	9.4	9.6	G5	2	..	18289b
26	3264	49.2	-48 37	8.3	8.1	B9	7	..	20786b	76	3506	49.4	-46 50	10.0	10.5	K5	1	..	18300b
27	3265	49.2	-49 0	9.8	9.5	A2	2	..	18300b	77	3384	49.4	-47 8	8.6	8.2	Ao	6	..	20786b
28	1454	49.2	-53 6	9.1	9.6	Go	2	..	24589b	78	3270	49.4	-48 26	9.0	8.4	B9	6	..	20786b
29	1011	49.2	-58 56	8.9	9.9	Ko	1	..	40088b	79	3271	49.4	-48 52	9.6	9.8	F8	2	..	18300b
30	821	49.2	-63 53	8.9	8.9	Ao	4	..	15274b	80	3128	49.4	-49 51	8.5	9.0	G5	4	E	24598b
31	531	49.3	+65 59	9.4	10.2	G5	1	..	37713i	81	1457	49.4	-53 4	9.0	9.2	Ao	4	..	24589b
32	1100	49.3	+60 20	8.6	8.9	F2	3	..	37676i	82	1416	49.4	-54 34	8.7	9.5	Ko	4	..	24589b
33	1965	49.3	+40 44	9.1	10.3	K5	1	..	37463i	83	1802	49.5	+24 37	8.2	8.3	A2	3	..	37503i
34	1714	49.3	+36 15	8.7	9.0	Fo	3	..	37448i	84	1712	49.5	+12 50	7.13	8.13	Ko	5	..	37553i
35	1808	49.3	+21 56	8.46	8.54	A3	3	E	37605i	85	1862	49.5	+7 11	8.2	8.3	A3	3	..	37553i
36	1656	49.3	+10 7	8.82	9.32	F8	1	..	20709b	86	1942	49.5	+1 8	9.7	9.7	Ao	2	..	15244b
37	1861	49.3	+7 26	8.7	9.5	G5	1	..	20709b	87	2132	49.5	-8 32	10.2	10.2	Ao	2	..	44419b
38	1819	49.3	+2 16	9.7	10.0	F2	1	..	15244b	88	2155	49.5	-11 40	9.6	9.7	A2	3	E	15262b
39	2112	49.3	-3 3	7.7	7.8	A3	5	..	38370i	89	2216	49.5	-17 38	9.4	9.4	A	1	..	18976b
40	2279	49.3	-10 53	8.5	9.5	Ko	3	..	15262b	90	6428	49.5	-24 0	9.0	8.1	B9	5	..	44381b
41	2072	49.3	-18 40	9.2	9.7	F8	2	..	18976b	91	5232	49.5	-25 9	9.45	9.2	Go	2	..	44381b
42	2123	49.3	-19 16	8.7	8.6	B9	4	..	18976b	92	5156	49.5	-26 11	10.0	9.2	Ao	2	..	44428b
43	2258	49.3	-20 40	9.4	10.1	K5	1	..	44433b	93	4689	49.5	-27 12	8.9	9.2	G5	6	..	44428b
44	5221	49.3	-25 49	10.0	9.2	F5	3	..	44433b	94	5035	49.5	-28 58	8.5	9.0	Ko	5	..	44428b
45	5232	49.3	-30 36	9.2	9.5	Go	1	..	42909b	95	5088	49.5	-29 34	7.8	8.0	Fo	7	..	44428b
46	5183	49.3	-31 33	7.46	8.7	K2	4	..	42909b	96	3509	49.5	-46 13	9.8	9.1	B5	4	..	18300b
47	4006	49.3	-37 30	8.9	9.0	A5	4	..	18435b	97	3508	49.5	-46 58	9.0	9.0	Go	3	..	20786b
48	3585	49.3	-40 18	9.9	9.2	Ao	3	..	18289b	98	3272	49.5	-48 8	10.2	9.3	Ao	3	..	20786b
49	3588	49.3	-41 4	8.6	9.5	Ko	4	..	18289b	99	3130	49.5	-49 35	8.8	8.6	A2	5	E	24598b
50	3682	49.3	-43 40	11.5	10.2	A	1	..	18289b	100	393	49.6	+73 25	9.2	10.0	G5	2	..	38187i

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

64600

7<sup>h</sup> 49<sup>m</sup>.6

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1233	49.6	+ 55 20	9.2	9.8	Go	1	..	37409i	51	1854	49.8	+ 4 8	9.4	9.5	A5	2	..	15244b
2	1712	49.6	+ 34 38	7.32	8.32	Ko	4	0,4	37569i	52	1855	49.8	- 0 30	8.5	9.5	Ko	3	0,2	15244b
3	1658	49.6	+ 10 38	8.8	9.4	Go	1	..	20709b	53	1885	49.8	- 1 34	8.7	8.7	Ao	2	..	38370i
4	1821	49.6	+ 2 49	10.4	10.4	Ao	1	..	15244b	54	2248	49.8	- 8 6	8.6	9.6	Ko	1	..	38629i
5	1853	49.6	- 0 22	8.5	8.6	A2	4	..	38370i	55	2127	49.8	- 19 26	8.7	8.6	B9	5	..	18976b
6	1883	49.6	- 1 10	7.5	8.3	G5	5	..	38370i	56	2070	49.8	- 22 16	9.8	9.8	A2	2	..	44381b
7	2341	49.6	- 2 32	7.15	7.43	Fo	7	..	38370i	57	5161	49.8	- 26 5	7.20	8.6	Mb	5	0,5	44381b
8	2342	49.6	- 2 42	8.7	9.0	Fo	1	..	38370i	58	5100	49.8	- 29 49	9.5	9.8	Ko	1	..	44428b
9	2246	49.6	- 7 8	8.5	9.3	G5	2	0,1	15262b	59	3690	49.8	- 43 43	9.0	9.4	K5	3	..	18289b
10	2275	49.6	- 9 32	7.9	8.7	G5	1	..	38629i	60	3687	49.8	- 43 57	10.5	9.1	Ao	6	..	18289b
11	2219	49.6	- 18 4	7.12	8.30	K5	5	..	18976b	61	3391	49.8	- 47 46	9.0	8.4	Ao	4	..	20786b
12	2260	49.6	- 20 47	8.1	9.3	K5	2	..	18976b	62	2737	49.8	- 51 34	9.2	9.2	F8	4	..	24598b
13	2166	49.6	- 21 46	9.0	9.5	Go	2	..	44381b	63	781	49.8	- 69 32	9.5	10.7	K5	1	..	15274b
14	2067	49.6	- 22 48	10.5	10.1	A2	2	..	44433b	64	1234	49.9	+ 55 26	8.9	9.2	Fo	3	..	37409i
15	6433	49.6	- 23 18	9.3	9.5	Ko	2	..	44381b	65	1235	49.9	+ 54 56	8.21	9.21	Ko	3	..	37409i
16	5234	49.6	- 26 0	7.12	8.1	G5	6	..	44381b	66	2283	49.9	- 10 11	9.16	9.72	Go	3	2,3	44419b
17	4696	49.6	- 27 5	11.2	9.3	Ao	2	..	44428b	67	2204	49.9	- 12 34	8.4	8.8	F5	4	3,4	44419b
18	4695	49.6	- 27 43	8.7	9.2	K	1	..	44428b	68	2222	49.9	- 17 32	9.1	9.1	Ao	5	..	18976b
19	4693	49.6	- 27 46	9.0	9.2	K5	1	..	44428b	69	6443	49.9	- 23 30	9.2	8.9	B9	4	..	44381b
20	5092	49.6	- 29 29	8.3	9.2	G5	3	..	44428b	70	6137	49.9	- 24 13	10.9	9.2	A3	2	..	44433b
21	3990	49.6	- 35 34	10.3	9.2	Ao	3	..	18435b	71	6136	49.9	- 24 39	10.9	9.2	Ao	1	0,1	44381b
22	3993	49.6	- 36 15	8.7	9.2	F8	2	..	42909b	72	5105	49.9	- 30 4	9.45	8.9	Ao	4	..	44428b
23	3632	49.6	- 42 16	9.6	8.9	F8	6	..	18289b	73	5244	49.9	- 30 47	9.5	8.7	Ao	3	..	42909b
24	1372	49.6	- 55 27	7.6	8.3	Ko	8	..	24589b	74	3997	49.9	- 36 41	7.41	7.7	A5	5	2,7	8897b
25	902	49.6	- 62 34	8.6	9.6	Ko	1	..	15516b	75	3596	49.9	- 40 54	10.3	10.4	A3	2	..	18289b
26	450	49.7	+ 69 13	8.0	9.0	Ko	3	..	37713i	76	1012	49.9	- 58 24	8.8	9.3	G5	2	..	40088b
27	1802	49.7	+ 36 56	9.5	9.8	F2	3	..	37448i	77	903	49.9	- 62 40	7.3	8.1	G5	8	..	15516b
28	1585	49.7	+ 16 46	8.3	8.6	Fo	3	..	37552i	78	330	49.9	- 77 55	8.8	8.9	A2	7	..	20652b
29	1793	49.7	+ 13 34	8.3	8.9	Go	2	..	37552i	79	1257	50.0	+ 56 17	8.6	9.1	F8	2	..	37409i
30	1863	49.7	+ 7 16	7.9	8.2	Fo	4	..	37553i	80	1803	50.0	+ 37 39	9.1	9.4	Fo	3	..	37448i
31	1834	49.7	+ 5 41	9.0	9.0	Ao	2	0,1	37560i	81	1612	50.0	+ 30 7	6.86	7.86	Ko	6	..	37569i
32	1944	49.7	+ 1 5	9.0	9.3	Fo	3	..	38370i	82	1794	50.0	+ 24 56	7.66	8.66	Ko	4	..	37503i
33	1854	49.7	- 0 14	8.53	9.60	K2	2	0,1	15244b	83	1872	50.0	+ 19 38	8.8	8.8	Ao	4	0,3	37605i
34	2289	49.7	- 5 39	9.8	9.8	Ao	2	..	44419b	84	1873	50.0	+ 19 6	8.7	9.5	G5	2	..	37552i
35	2357	49.7	- 6 14	9.1	9.2	A2	1	..	38629i	85	1815	50.0	+ 9 7	5.78	6.06	Fo	9	..	37553i
36	2133	49.7	- 8 44	9.1	9.4	Fo	3	..	44419b	86	1816	50.0	+ 8 59	8.3	8.3	Ao	6	..	20709b
37	2220	49.7	- 17 52	8.1	9.2	K2	3	..	18976b	87	1866	50.0	+ 7 49	8.8	9.4	Go	1	..	20709b
38	2126	49.7	- 19 21	9.8	10.0	Fo	1	..	18976b	88	2251	50.0	- 7 9	9.1	9.1	Ao	2	..	15262b
39	6131	49.7	- 24 33	11.2	9.2	B	1	R	44429b	89	2284	50.0	- 10 49	8.3	..	K	3	R	44419b
40	3992	49.7	- 35 22	9.3	10.0	K2	1	..	18435b	90	2206	50.0	- 12 25	8.6	9.7	K2	4	0,3	44419b
41	3636	49.7	- 42 11	10.2	10.1	Ko	1	..	18289b	91	2223	50.0	- 17 23	9.0	9.0	B9	4	..	18976b
42	3527	49.7	- 45 44	10.5	9.9	A3	2	..	18300b	92	2133	50.0	- 19 53	9.4	9.2	Ao	3	..	18976b
43	917	49.7	- 59 24	8.7	8.8	Ao	2	..	15516b	93	2170	50.0	- 21 45	9.1	9.8	Ao	1	..	44381b
44	900	49.7	- 61 0	8.7	8.7	B9	3	..	15516b	94	2169	50.0	- 22 4	10.1	10.0	Ao	2	..	44433b
45	1509	49.8	+ 45 43	8.1	8.2	A3	3	..	37704i	95	6446	50.0	- 23 12	10.9	10.4	Ao	2	..	44433b
46	1502	49.8	+ 27 57	8.6	8.6	Ao	3	..	37569i	96	5237	50.0	- 25 53	7.8	8.9	K5	4	3,3	44429b
47	1804	49.8	+ 24 29	8.7	9.0	F	2	..	37503i	97	3733	50.0	- 40 0	9.5	9.5	Ao	3	..	18289b
48	1946	49.8	+ 20 9	5.36	5.36	Ao	..	0,10	56,85	98	3533	50.0	- 45 42	10.2	9.4	Ao	4	..	18300b
49	1813	49.8	+ 9 37	7.7	8.5	G5	4	..	37553i	99	829	50.0	- 65 38	9.8	9.8	A	1	..	15274b
50	1864	49.8	+ 7 25	8.3	8.3	B9	4	..	37553i										



## THE HENRY DRAPER CATALOGUE.

64700

7<sup>h</sup> 50<sup>m</sup>.0

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	782	50.0	-69 12	9.7	10.9	K5	1	..	15274b	51	2208	50.3	-13 1	8.0	8.4	F5	3	E	18976b
2	1755	50.1	+41 20	8.2	8.8	Go	3	..	37463i	52	2266	50.3	-20 29	9.4	9.5	A2	2	..	18976b
3	1651	50.1	+29 11	8.7	9.1	F5	2	..	37569i	53	6458	50.3	-23 33	10.7	9.5	A0	2	..	44433b
4	1805	50.1	+23 59	7.50	8.06	Go	5	..	37503i	54	5245	50.3	-25 46	10.7	9.2	A2	1	..	44429b
5	1806	50.1	+23 54	6.74	6.69	B8	8	..	37503i	55	5171	50.3	-26 59	8.1	8.7	B8	3	..	44428b
6	1822	50.1	+2 31	9.0	9.3	F2	2	..	15244b	56	4706	50.3	-27 51	6.51	7.0	A2	3	0,10	8911b
7	1946	50.1	+1 38	9.0	10.2	K5	2	..	15244b	57	5117	50.3	-29 17	9.2	8.9	F0	5	..	44428b
8	1947	50.1	+1 21	9.7	10.1	F5	2	..	15244b	58	3603	50.3	-40 31	8.3	9.2	K0	5	..	18289b
9	1887	50.1	-1 59	8.52	8.52	A0	3	..	38370i	59	3392	50.3	-47 22	10.0	9.8	A2	2	..	18300b
10	2280	50.1	-9 43	10.1	10.1	A0	2	..	15262b	60	3396	50.3	-47 51	4.32	4.10	B1	..	R	28,201
11	2075	50.1	-18 53	9.2	9.2	B9	3	..	18976b	61	1315	50.3	-52 43	7.3	7.4	B9	5	..	8952b
12	6448	50.1	-23 13	11.2	9.8	B8	1	..	44433b	62	904	50.3	-60 8	9.1	8.8	A2	2	..	15516b
13	6447	50.1	-23 32	11.4	9.8	F5	2	..	44433b	63	759	50.3	-66 26	9.0	9.3	F2	5	..	15274b
14	5164	50.1	-26 44	9.5	9.2	A2	2	..	44428b	64	224	50.4	+81 59	8.8	9.9	K2	2	..	37546i
15	3643	50.1	-42 37	10.0	9.2	F2	3	..	18289b	65	1805	50.4	+37 44	8.8	9.9	K2	1	..	37448i
16	3823	50.1	-44 58	8.12	7.9	A0	8	..	18300b	66	1714	50.4	+34 32	8.6	9.7	K2	1	..	37448i
17	3022	50.1	-50 16	7.24	7.3	B3	..	2,6	28,201	67	1810	50.4	+22 50	7.7	8.7	K0	5	0,4	37605i
18	2741	50.1	-51 18	7.8	8.3	A	5	..	24589b	68	1719	50.4	+21 4	8.4	9.4	K0	2	..	37605i
19	2742	50.1	-51 19	7.8	8.4	A	5	..	24589b	69	1840	50.4	+3 32	8.7	9.0	F2	2	..	37560i
20	1460	50.1	-53 44	9.1	9.2	A0	4	..	24589b	70	2143	50.4	-4 25	8.3	9.3	K0	4	..	15262b
21	1461	50.1	-53 56	9.2	9.2	A0	4	..	24598b	71	2229	50.4	-17 48	8.7	8.7	A0	4	..	18976b
22	1420	50.1	-54 7	5.84	5.67	B3	..	2,6	56,124	72	5248	50.4	-25 55	10.0	9.2	B9	1	..	44429b
23	215	50.1	-82 20	7.58	9.0	K2	5	..	20869b	73	5060	50.4	-28 41	10.2	8.9	B9	5	..	44428b
24	340	50.2	+74 30	8.9	9.7	G5	2	..	38187i	74	5121	50.4	-29 38	10.2	9.8	A0	2	..	44428b
25	1804	50.2	+37 10	8.4	9.4	K0	5	..	37448i	75	5210	50.4	-31 7	10.9	10.1	K0	1	..	44428b
26	1717	50.2	+36 49	7.7	8.5	G5	6	..	37569i	76	5214	50.4	-31 14	10.2	9.5	K0	1	..	44428b
27	1718	50.2	+36 10	10.0	10.1	A2	1	..	37448i	77	4283	50.4	-33 46	7.5	7.7	A0	3	..	11110b
28	1713	50.2	+35 8	9.4	9.4	A0	3	..	37448i	78	4000	50.4	-35 28	9.3	9.5	A3	2	..	18435b
29	1648	50.2	+31 58	7.54	7.82	F0	8	..	37569i	79	3648	50.4	-42 25	9.6	8.0	A0	7	..	18289b
30	1797	50.2	+13 37	7.9	8.7	G5	4	..	37552i	80	3527	50.4	-46 42	9.8	9.3	A0	5	..	18300b
31	1660	50.2	+10 31	9.0	9.0	A0	2	..	20709b	81	3287	50.4	-48 40	9.8	9.5	A0	4	..	18300b
32	2141	50.2	-4 19	7.9	8.0	A2	3	..	38370i	82	3286	50.4	-48 59	10.2	9.8	A0	3	..	18300b
33	2282	50.2	-9 30	8.9	9.5	Go	2	..	15262b	83	3141	50.4	-49 31	8.2	9.0	G5	4	..	18300b
34	2285	50.2	-10 56	8.4	8.4	A0	3	..	38629i	84	921	50.4	-59 21	7.2	7.4	B9	7	1,2	15516b
35	2225	50.2	-17 59	8.7	8.7	A0	4	..	18976b	85	226	50.4	-80 24	9.5	9.5	A	1	..	20869b
36	2265	50.2	-20 14	9.4	9.5	A3	1	..	18976b	86	1511	50.5	+44 55	9.47	10.03	Go	2	..	37704i
37	5242	50.2	-25 26	9.2	8.4	A3	3	..	44381b	87	1653	50.5	+29 36	9.4	9.7	F2	2	..	37569i
38	5207	50.2	-31 28	8.3	8.6	A2	5	..	42909b	88	1876	50.5	+19 27	9.0	10.0	K	1	..	37605i
39	3523	50.2	-46 26	9.4	9.8	G5	3	..	18300b	89	1787	50.5	+13 55	8.7	9.7	K0	1	..	37552i
40	3137	50.2	-49 21	4.83	4.66	B3	..	2,8	28,201	90	1917	50.5	+7 53	8.2	8.3	A5	3	..	20709b
41	2743	50.2	-51 39	11.5	10.1	A	2	E	24598b	91	1822	50.5	+6 20	8.5	9.3	G5	2	..	37553i
42	1312	50.2	-52 12	9.1	8.7	A2	8	..	24598b	92	1841	50.5	+3 41	8.3	8.4	A2	2	..	37560i
43	1013	50.2	-58 44	9.6	9.6	A0	2	..	40088b	93	1890	50.5	-1 56	7.9	7.9	A0	5	..	38370i
44	1756	50.3	+41 25	8.5	8.9	F5	3	..	37463i	94	2289	50.5	-10 53	7.7	7.7	B8	7	..	38629i
45	1662	50.3	+10 43	7.5	7.5	B9	8	..	37553i	95	2274	50.5	-14 22	8.7	9.1	F5	1	..	18976b
46	1836	50.3	+5 16	8.5	9.0	F8	3	..	37553i	96	2077	50.5	-18 44	9.4	9.4	A	4	R	18976b
47	2127	50.3	-0 2	9.33	9.33	A0	5	0,2	15244b	97	6152	50.5	-18 44	9.4	9.4	A	4	R	18976b
48	2120	50.3	-3 45	8.6	8.7	A5	1	..	38370i	98	6152	50.5	-24 16	9.0	9.2	K0	4	2,2	44433b
49	2360	50.3	-6 40	9.2	9.2	A0	2	..	38629i	99	6153	50.5	-24 48	11.4	9.2	A0	1	0,1	44381b
50	2254	50.3	-7 40	8.9	9.7	G5	2	..	44419b	100	6156	50.5	-24 50	10.2	9.2	F5	2	3,1	44429b



64800

7<sup>h</sup> 50<sup>m</sup>.5

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	5261	50.5	-30 18	10.2	9.2	F8	2	..	44428b	51	1700	50.8	+31 25	8.8	8.9	A5	4	..	37569i
2	4002	50.5	-35 37	5.41	5.24	B3	..	O,R	56,124	52	1717	50.8	+11 7	7.56	7.56	Ao	5	..	37553i
3	4008	50.5	-37 3	9.0	9.5	A5	3	..	18435b	53	1950	50.8	+1 5	8.7	9.7	Ko	1	0,3-	37560i
4	3800	50.5	-39 3	8.7	8.9	A2	4	..	18435b	54	2129	50.8	-0 1	8.98	8.93	B8	5	0,2	15244b
5	3743	50.5	-39 44	9.5	9.5	Ao	3	..	18435b	55	2233	50.8	-17 53	9.6	9.6	Ao	2	..	18976b
6	3518	50.5	-41 4	9.3	10.1	G5	2	..	18289b	56	R	50.8	-22 48	11.6	10.0	Ao	1	..	44433b
7	3517	50.5	-42 0	10.3	9.8	F2	2	..	18289b	57	6465	50.8	-23 12	6.87	7.2	Ao	5	0,3	11036b
8	3828	50.5	-44 55	10.5	9.9	A	2	..	18300b	58	5192	50.8	-26 12	9.2	9.2	Ko	3	..	44428b
9	2747	50.5	-51 52	10.2	10.0	A5	3	E	24598b	59	5191	50.8	-27 1	10.2	9.5	Ao	2	..	44428b
10	1319	50.5	-52 25	8.1	8.7	Ko	3	..	24598b	60	4718	50.8	-28 2	9.0	9.5	Ko	3	..	44428b
11	904	50.5	-62 39	8.1	8.1	B8	6	..	15516b	61	5069	50.8	-28 12	9.5	9.5	K5	2	..	44428b
12	1375	50.6	+51 37	8.0	8.1	A2	3	..	38188i	62	5133	50.8	-30 4	10.2	9.8	Fo	1	..	44428b
13	1813	50.6	+22 8	8.75	8.89	A5	1	..	37503i	63	3616	50.8	-41 2	9.9	10.1	K2	2	..	18289b
14	1800	50.6	+12 55	8.2	8.2	Ao	3	0,2	37552i	64	3545	50.8	-45 7	9.65	9.4	A2	3	..	18300b
15	1823	50.6	+6 47	7.8	8.3	F8	4	..	37553i	65	331	50.8	-77 23	8.8	10.0	K5	5	..	20652b
16	2145	50.6	-4 45	9.1	9.1	Ao	3	..	15262b	66	1495	50.9	+50 31	8.8	9.4	Go	1	..	38188i
17	2293	50.6	-5 46	9.1	9.1	Ao	3	..	44419b	67	1335	50.9	+46 43	8.4	9.2	G5	3	..	37704i
18	2163	50.6	-11 31	8.5	8.5	Ao	3	..	38629i	68	1717	50.9	+12 1	7.7	7.7	B9	4	..	37553i
19	2190	50.6	-16 15	9.2	9.2	A	1	..	18976b	69	1858	50.9	+4 32	9.0	10.0	Ko	1	..	37560i
20	6463	50.6	-24 2	7.7	9.5	Ko	6	2,2	44433b	70	2275	50.9	-14 28	8.7	9.1	F5	2	..	18976b
21	6158	50.6	-24 34	9.3	9.0	Ko	3	0,2	44429b	71	2128	50.9	-15 40	8.5	8.5	B9	4	..	18976b
22	4710	50.6	-27 30	8.3	8.3	Ao	7	..	44428b	72	2174	50.9	-21 48	9.6	9.8	Ao	1	..	44381b
23	4709	50.6	-27 32	10.4	8.9	A	3	..	44428b	73	2074	50.9	-22 44	9.1	9.8	K5	1	..	44433b
24	4549	50.6	-32 14	8.7	8.6	B9	4	..	42909b	74	5073	50.9	-28 32	10.4	9.0	Ao	5	..	44428b
25	3608	50.6	-40 44	8.9	8.4	Ao	8	..	18289b	75	5072	50.9	-28 41	10.2	9.2	Ao	3	..	44428b
26	3607	50.6	-40 59	9.2	10.1	K2	1	..	18289b	76	4091	50.9	-34 35	6.13	7.2	K2	6	3,4	42909b
27	3520	50.6	-41 26	7.0	8.0	B9	8	0,4	8897b	77	3809	50.9	-38 41	9.0	9.2	Ao	4	..	18435b
28	3653	50.6	-42 14	10.5	9.5	B9	2	..	18289b	78	3525	50.9	-41 54	9.9	9.5	F2	3	..	18289b
29	3830	50.6	-44 31	9.6	8.7	Ao	5	..	18289b	79	3708	50.9	-43 16	9.8	10.2	K2	1	..	18289b
30	1321	50.6	-52 31	9.2	9.8	Go	2	..	24598b	80	3710	50.9	-43 50	10.5	10.2	Ko	2	..	18289b
31	922	50.6	-59 14	7.2	7.8	Ao	6	..	15516b	81	3548	50.9	-45 23	9.2	8.5	Ao	7	..	18300b
32	1654	50.7	+29 48	8.66	9.44	G5	1	..	37569i	82	3292	50.9	-48 32	9.1	8.6	B8	8	..	18300b
33	1684	50.7	+26 22	8.2	9.2	Ko	4	..	37503i	83	1127	51.0	+58 58	8.8	9.4	Go	2	..	37676i
34	1950	50.7	+20 9	9.4	10.5	K2	2	..	37503i	84	1718	51.0	+10 59	8.7	9.2	F8	1	..	20709b
35	2294	50.7	-5 57	9.1	9.2	A2	2	..	44419b	85	1826	51.0	+6 5	8.3	8.3	B9	3	..	37553i
36	2256	50.7	-8 2	8.5	8.5	Ao	2	..	38629i	86	1838	51.0	+4 54	8.88	9.38	F8	1	..	37560i
37	2294	50.7	-10 24	7.36	7.78	F5	5	..	38629i	87	2131	51.0	-0 4	9.13	9.13	Ao	2	0,2	12774b
38	2165	50.7	-11 49	9.6	9.6	A	2	E	15262b	88	2296	51.0	-5 15	9.15	9.29	A5	3	..	15262b
39	2192	50.7	-16 49	9.1	9.7	Go	2	..	18976b	89	2297	51.0	-5 33	9.1	10.3	K5	1	..	15262b
40	2073	50.7	-22 37	9.4	9.5	A3	1	..	44381b	90	2366	51.0	-6 12	9.8	9.8	Ao	2	..	44419b
41	4713	50.7	-28 1	8.7	9.5	K	2	..	44428b	91	2367	51.0	-6 16	8.1	9.1	Ko	5	0,4	15262b
42	5218	50.7	-31 22	9.0	9.2	G5	1	..	42909b	92	2132	51.0	-15 9	9.26	9.26	Ao	2	..	18976b
43	3704	50.7	-43 20	10.0	9.9	G5	2	..	18289b	93	2130	51.0	-15 35	8.7	8.7	Ao	2	..	18976b
44	3705	50.7	-43 44	8.2	7.5	Fo	4	..	8897b	94	2082	51.0	-18 47	6.77	6.83	A2	6	0,9	11036b
45	3831	50.7	-44 37	9.4	8.5	Ao	7	..	18289b	95	2276	51.0	-20 57	9.2	9.5	A2	3	..	44433b
46	3544	50.7	-45 42	9.0	8.4	A2	10	..	18300b	96	2176	51.0	-21 46	8.5	9.6	K2	1	..	44381b
47	923	50.7	-59 39	9.3	9.3	A	2	..	40088b	97	2075	51.0	-22 51	9.1	8.3	B9	5	..	44381b
48	830	50.7	-67 25	8.6	8.7	A2	3	..	8913b	98	5226	51.0	-31 16	7.17	7.4	B8	9	..	42909b
49	1494	50.8	+50 8	8.6	9.6	K	1	..	38188i	99	4014	51.0	-36 0	8.6	8.1	B8	3	1,4	8897b
50	1508	50.8	+47 22	8.5	9.5	Ko	2	..	37704i	100	3619	51.0	-40 28	8.9	9.5	Ko	4	..	18289b

## THE HENRY DRAPER CATALOGUE.

64900

7<sup>h</sup> 51<sup>m</sup>.0

H.D.	DM.	R.A. 1900	Dec. 1900	Ptn.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptn.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	3618	51.0	-40 36	8.6	8.4	Ao	8	..	18289b	51	4096	51.2	-35 4	9.00	9.5	Fo	3	..	18435b
2	3527	51.0	-41 24	7.3	8.4	Ko	4	..	8897b	52	4018	51.2	-35 19	9.5	9.2	B9	3	..	18435b
3	3661	51.0	-42 49	8.4	8.4	Ko	4	0,7	8897b	53	3757	51.2	-39 24	8.6	8.9	F5	5	..	18435b
4	3659	51.0	-42 59	10.5	10.1	K5	2	..	18289b	54	3664	51.2	-42 13	7.5	8.9	K2	3	2,7	8897b
5	3838	51.0	-45 2	8.14	7.9	B9	9	..	18300b	55	3713	51.2	-44 2	10.0	9.6	Ao	3	..	18289b
6	3542	51.0	-46 19	10.9	9.8	Ao	2	..	18300b	56	3550	51.2	-45 44	10.2	9.8	Fo	2	..	18300b
7	3294	51.0	-48 14	9.6	9.5	Ao	2	..	18300b	57	1513	51.3	+45 9	9.5	9.5	Ao	1	..	37463i
8	3030	51.0	-50 40	9.0	8.7	B9	5	..	24598b	58	1693	51.3	+44 15	6.47	7.47	Ko	7	..	37704i
9	121	51.0	-87 12	8.5	9.5	Ko	2	..	22578b	59	1724	51.3	+21 14	7.04	7.82	G5	6	..	37605i
10	302	51.1	+76 49	8.6	9.4	G5	3	..	38187i	60	1590	51.3	+16 3	5.96	6.96	Ko	8	..	37605i
11	606	51.1	+65 1	7.33	7.61	Fo	8	5,7	37713i	61	1707	51.3	+15 14	8.3	8.3	Ao	4	..	37552i
12	1751	51.1	+43 16	8.6	8.9	F2	3	..	37704i	62	1921	51.3	+ 8 50	8.3	8.4	A3	2	..	37553i
13	1758	51.1	+41 15	8.2	8.7	F8	3	..	37463i	63	1873	51.3	+ 7 37	8.1	8.2	A2	3	..	37553i
14	1717	51.1	+34 19	8.0	8.8	G5	3	..	37569i	64	1861	51.3	+ 4 51	8.14	9.32	K2	4	3,2 R	15244b
15	1790	51.1	+14 37	9.0	9.1	A2	4	..	37552i	65	1827	51.3	+ 2 35	8.1	8.1	Ao	5	1,3	38370i
16	1719	51.1	+11 19	7.7	9.1	Ma	1	..	20709b	66	1953	51.3	+ 1 5	9.0	10.0	Ko	1	0,1	37560i
17	1859	51.1	+ 4 31	7.9	8.0	A3	5	..	37560i	67	2217	51.3	-12 21	6.79	7.79	Ko	4	0,9	38629i
18	1843	51.1	+ 3 16	9.0	9.0	Ao	2	..	15244b	68	2139	51.3	-19 41	9.4	9.5	A2	2	..	18976b
19	2368	51.1	- 6 10	8.5	8.9	F5	3	..	15262b	69	2177	51.3	-21 27	9.2	9.6	Ao	2	..	44433b
20	2304	51.1	-13 28	7.7	8.0	F2	4	0,7	2399b	70	6489	51.3	-23 42	10.7	9.8	A2	2	..	44433b
21	2133	51.1	-15 19	7.05	8.05	Ko	8	..	18976b	71	4730	51.3	-27 12	9.5	9.2	Ao	2	..	44428b
22	5268	51.1	-25 40	7.5	8.9	K2	5	..	44429b	72	4729	51.3	-28 0	7.5	7.3	B8	9	..	44428b
23	5196	51.1	-26 10	8.0	8.0	B9	8	..	44428b	73	5085	51.3	-28 38	9.3	8.9	F8	4	..	44428b
24	5081	51.1	-28 45	10.4	9.2	B9	3	..	44428b	74	5275	51.3	-30 39	6.52	8.3	Ko	6	..	42909b
25	5138	51.1	-29 40	9.7	9.8	Ko	1	..	44428b	75	3816	51.3	-38 9	7.16	7.7	Ao	4	..	8897b
26	5272	51.1	-30 50	8.9	9.2	G5	2	..	42909b	76	3846	51.3	-44 22	11.5	9.4	A2	3	..	18289b
27	3756	51.1	-39 52	8.00	8.6	K2	5	..	18435b	77	3845	51.3	-44 34	9.8	9.6	Ao	4	..	18289b
28	1328	51.1	-52 50	9.3	9.3	Ao	2	..	24598b	78	3552	51.3	-46 35	10.9	10.2	Ao	2	..	18300b
29	925	51.1	-59 34	9.0	8.8	A	3	..	40088b	79	762	51.3	-65 2	9.73	9.8	Fo	2	..	15274b
30	828	51.1	-64 2	8.0	8.1	A2	4	..	8913b	80	789	51.3	-69 50	8.2	8.5	F2	7	..	15274b
31	693	51.1	-70 14	8.7	9.1	F5	3	..	15274b	81	694	51.3	-70 31	8.0	8.3	Fo	8	..	15274b
32	303	51.2	+76 19	8.9	9.5	Go	3	..	38187i	82	255	51.3	-79 25	8.9	9.5	Go	4	..	22237b
33	1753	51.2	+42 55	8.1	8.9	G5	3	..	37704i	83	1721	51.4	+11 57	7.9	7.9	B9	5	..	37553i
34	1622	51.2	+32 56	6.94	7.00	A2	7	..	37569i	84	1822	51.4	+ 9 19	8.2	8.3	A3	4	..	37553i
35	1879	51.2	+19 23	9.0	9.1	A2	2	..	37605i	85	1859	51.4	- 0 45	8.3	9.3	Ko	2	5,1	37560i
36	1706	51.2	+15 24	8.3	8.4	A2	4	..	37552i	86	2301	51.4	- 5 22	9.1	9.4	F2	4	..	15262b
37	1828	51.2	+ 6 40	7.9	9.1	K5	2	0,1	37553i	87	2300	51.4	- 5 29	9.4	9.4	Ao	2	..	15262b
38	1860	51.2	+ 4 44	6.32	7.32	Ko	6	..	37553i	88	2289	51.4	- 9 36	7.7	7.7	Ao	6	..	38629i
39	1844	51.2	+ 3 40	9.4	9.4	A	2	..	15244b	89	2296	51.4	-10 18	9.1	9.2	A2	3	..	15262b
40	2133	51.2	+ 0 48	8.44	9.51	K2	2	3,1	12774b	90	2170	51.4	-11 41	9.0	10.1	K2	2	E	15262b
41	2261	51.2	- 7 41	9.1	9.2	A2	3	..	44419b	91	2178	51.4	-21 41	9.2	10.1	Ko	1	..	44433b
42	2287	51.2	- 9 32	8.0	8.8	G5	1	..	38629i	92	6494	51.4	-23 10	9.7	9.8	G5	1	..	44381b
43	2295	51.2	-10 25	8.3	8.3	B9	3	..	38629i	93	6495	51.4	-23 48	8.1	7.7	Bo	6	..	44381b
44	2169	51.2	-11 10	9.1	9.1	Ao	3	..	15262b	94	5088	51.4	-28 10	9.7	9.8	K2	1	..	44428b
45	2305	51.2	-13 24	8.6	9.6	Ko	1	E	18976b	95	3764	51.4	-39 45	8.1	8.4	Fo	6	..	18435b
46	2277	51.2	-15 3	9.8	9.8	A	1	..	18976b	96	3626	51.4	-40 46	10.6	9.8	B9	3	..	18289b
47	2134	51.2	-15 23	9.2	9.3	A2	2	..	18976b	97	3719	51.4	-43 49	10.9	9.3	Ao	4	..	18289b
48	2085	51.2	-18 50	8.7	9.8	K2	2	..	18976b	98	3555	51.4	-47 3	8.5	8.8	Ao	8	..	18300b
49	5274	51.2	-25 20	9.5	9.3	Ko	2	..	44433b	99	2755	51.4	-51 7	10.0	10.1	Ao	2	..	24598b
50	4562	51.2	-32 30	9.2	8.6	B9	3	..	42909b	100	1330	51.4	-52 6	9.4	10.0	Go	2	..	24598b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

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7<sup>h</sup> 51<sup>m</sup>.4

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	216	51.4	-82 6	7.88	8.8	Ko	4	..	20869b	51	2080	51.7	-23 6	10.1	9.8	F2	1	..	44381b
2	1807	51.5	+37 27	9.8	10.4	G	1	..	37448i	52	6507	51.7	-23 51	9.0	8.7	A5	3	..	44381b
3	1811	51.5	+24 46	8.91	8.91	Ao	3	..	37503i	53	6508	51.7	-24 0	10.7	9.8	A2	2	..	44433b
4	1828	51.5	+2 52	8.7	9.1	F5	1	..	37560i	54	3775	51.7	-39 29	8.6	8.3	B8	5	..	18435b
5	2264	51.5	-7 44	7.66	7.72	A2	5	..	38629i	55	3851	51.7	-44 49	10.0	9.6	Fo	3	..	18300b
6	2199	51.5	-16 17	9.1	9.1	Ao	3	..	18976b	56	3557	51.7	-46 47	9.2	9.4	F8	4	..	18300b
7	2279	51.5	-20 31	9.6	9.6	Ao	2	..	44433b	57	3411	51.7	-47 14	9.1	9.3	Go	4	..	18300b
8	2278	51.5	-20 57	9.4	9.8	Ao	3	..	44433b	58	3167	51.7	-49 26	8.9	8.4	B8	4	..	18300b
9	2179	51.5	-21 28	9.8	9.6	Ao	2	..	44433b	59	2757	51.7	-52 0	8.5	9.2	F5	6	..	24598b
10	6188	51.5	-24 43	9.7	8.9	Ao	4	0,3	44429b	60	908	51.7	-61 24	8.9	9.3	F5	3	..	15516b
11	6190	51.5	-25 1	8.08	8.9	G5	4	0,3	44429b	61	1128	51.8	+59 13	8.9	9.0	A2	3	..	37676i
12	5281	51.5	-30 5	7.14	7.7	G5	6	..	42909b	62	1720	51.8	+35 12	8.0	8.0	Ao	4	..	37448i
13	3847	51.5	-44 6	7.0	7.0	B9	6	1,4	18559b	63	1795	51.8	+18 23	7.7	8.0	F2	5	..	37605i
14	3298	51.5	-48 6	10.5	10.0	Ao	1	..	18300b	64	1712	51.8	+17 44	9.0	9.0	Ao	2	..	37552i
15	1343	51.5	-57 5	8.8	9.0	A	3	..	40088b	65	1804	51.8	+13 28	7.7	8.5	G5	3	..	37552i
16	332	51.5	-77 51	10.0	10.6	Go	2	..	20652b	66	1824	51.8	+8 54	6.12	6.90	G5	6	..	37553i
17	275	51.6	+78 32	8.6	9.6	Ko	2	..	38187i	67	1861	51.8	-0 31	8.3	8.9	Go	2	5,3-	38370i
18	1693	51.6	+49 47	8.22	8.28	A2	4	..	38188i	68	2303	51.8	-5 50	8.4	9.4	Ko	5	..	15262b
19	1694	51.6	+48 53	7.42	8.42	Ko	4	..	37704i	69	2082	51.8	-22 17	8.9	9.5	Ko	2	..	44381b
20	1809	51.6	+37 10	9.8	9.8	Ao	2	..	37448i	70	6510	51.8	-23 28	10.9	9.5	A2	1	..	44381b
21	1623	51.6	+33 13	8.0	9.0	Ko	3	..	37569i	71	5105	51.8	-28 45	10.2	9.5	B9	2	..	44428b
22	1620	51.6	+30 44	8.8	8.8	B9	4	..	37569i	72	5169	51.8	-29 16	8.9	9.8	K5	1	..	44428b
23	1513	51.6	+27 46	7.7	8.7	Ko	3	E	37569i	73	3852	51.8	-44 42	9.8	9.1	A	4	..	18300b
24	1801	51.6	+13 41	8.3	8.4	A5	3	..	37552i	74	3558	51.8	-45 24	7.7	7.1	Ao	3	1,2	8952b
25	1722	51.6	+11 16	8.5	8.6	A3	2	..	20709b	75	1473	51.8	-53 43	9.5	10.7	K5	2	..	24598b
26	2265	51.6	-7 52	9.1	10.1	Ko	2	..	44419b	76	1382	51.8	-55 24	9.0	9.2	A	4	E	24598b
27	2281	51.6	-14 38	8.1	8.7	Go	3	..	18976b	77	906	51.8	-62 6	8.0	9.0	Ko	3	..	15516b
28	2137	51.6	-15 37	8.5	9.7	K5	2	..	18976b	78	1498	51.9	+50 37	7.55	8.62	K2	3	..	38188i
29	2139	51.6	-15 40	9.4	9.4	B9	2	..	18976b	79	1848	51.9	+3 14	7.7	7.5	B3	4	..	37560i
30	6502	51.6	-23 25	11.6	9.6	B8	3	..	44433b	80	1955	51.9	+1 46	8.3	8.9	Go	4	5,2	37560i
31	6503	51.6	-23 53	8.9	8.0	A2	4	..	44381b	81	1956	51.9	+1 15	10.0	10.1	A2	2	..	15244b
32	5284	51.6	-25 36	9.5	8.3	A3	5	..	44429b	82	2129	51.9	-3 11	7.74	8.74	Ko	2	E	38207i
33	5211	51.6	-26 51	8.1	8.9	Ko	5	..	44428b	83	6520	51.9	-23 56	11.4	10.0	A3	1	..	44433b
34	5093	51.6	-28 10	10.4	8.9	B9	3	..	44428b	84	5289	51.9	-25 56	9.5	9.3	K5	2	0,1	44428b
35	3531	51.6	-41 8	10.3	10.1	K2	2	..	18289b	85	5217	51.9	-26 28	7.9	8.0	A2	7	..	44428b
36	3722	51.6	-43 51	10.0	9.0	F5	5	..	18289b	86	4746	51.9	-27 40	9.3	9.0	A2	3	..	44428b
37	3848	51.6	-44 7	7.8	7.6	B9	3	R	18559b	87	5107	51.9	-28 16	9.5	9.2	B5	2	..	44428b
38	3165	51.6	-49 55	7.48	6.7	B3	..	2,5	28,201	88	3637	51.9	-40 20	10.6	10.1	A5	1	..	18289b
39	912	51.6	-60 40	8.6	8.2	B9	3	..	15516b	89	3536	51.9	-41 34	7.5	8.1	Go	4	..	8897b
40	472	51.6	-74 23	9.0	9.6	Go	2	..	22237b	90	3676	51.9	-42 17	9.2	8.7	Ao	7	..	18289b
41	1754	51.7	+43 47	7.04	6.87	B3	7	..	37704i	91	3725	51.9	-43 18	10.2	9.4	Ao	3	..	18289b
42	1624	51.7	+33 40	9.4	9.9	F8	2	..	37448i	92	3727	51.9	-43 36	10.5	8.5	A2	8	..	18289b
43	1656	51.7	+29 47	8.36	9.36	Ko	2	..	37569i	93	1476	51.9	-53 47	9.0	9.8	Fo	3	..	24598b
44	1802	51.7	+13 32	7.5	8.5	Ko	3	..	37552i	94	916	51.9	-60 48	7.9	7.7	Ao	4	1,8	8913b
45	1723	51.7	+11 50	9.0	9.1	A2	2	..	20709b	95	2307	52.0	-5 27	10.1	10.2	A2	2	..	44419b
46	2139	51.7	+0 31	8.7	9.7	Ko	3	..	15244b	96	2300	52.0	-10 20	9.2	9.2	Ao	3	..	15262b
47	2371	51.7	-6 8	9.0	9.5	F8	3	..	44419b	97	2299	52.0	-10 36	8.9	8.9	Ao	1	..	38629i
48	2297	51.7	-10 47	9.2	10.2	Ko	1	..	15262b	98	2143	52.0	-15 15	7.35	8.42	K2	5	..	18976b
49	2182	51.7	-21 30	10.1	10.9	Ma	1	..	44433b	99	2239	52.0	-17 25	9.2	9.2	Ao	3	..	18976b
50	2081	51.7	-22 45	9.1	9.2	G5	2	..	44381b	100	2090	52.0	-18 46	9.2	9.2	Ao	3	..	18976b

## THE HENRY DRAPER CATALOGUE.

65100

7<sup>h</sup> 52<sup>m</sup>.0

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	2148	52.0	-20 1	9.38	9.5	Ao	1	..	18976b	51	2763	52.2	-51 22	9.6	10.0	A5	3	..	24598b
2	2284	52.0	-20 12	6.76	7.2	Ao	6	0,10	11036b	52	919	52.2	-60 19	7.3	9.0	K5	8	..	15516b
3	5291	52.0	-25 6	9.25	9.2	Ko	2	..	44429b	53	911	52.2	-61 43	8.1	8.7	A3	4	..	15516b
4	5290	52.0	-25 52	10.9	9.2	Ao	1	..	44428b	54	624	52.2	-71 45	8.7	8.8	A3	3	..	24527b
5	5220	52.0	-26 49	9.3	8.9	B9	2	..	44428b	55	395	52.3	+72 56	8.4	8.7	Fo	4	..	37559i
6	4749	52.0	-27 38	10.7	9.5	Ao	1	..	44428b	56	1695	52.3	+49 4	8.0	8.6	Go	2	..	38188i
7	5293	52.0	-30 20	9.7	9.8	Fo	2	..	44428b	57	1799	52.3	+17 57	9.0	10.1	K2	1	..	37552i
8	4029	52.0	-36 19	8.3	8.0	A3	3	0,4	8897b	58	1864	52.3	-0 21	7.03	7.03	Ao	7	1,7	38207i
9	4050	52.0	-37 36	8.3	8.3	A2	2	..	8897b	59	2231	52.3	-12 10	8.6	8.7	A2	3	..	20896b
10	3539	52.0	-41 32	11.7	10.4	A2	1	..	18289b	60	2288	52.3	-20 48	8.3	9.2	Ko	2	..	44381b
11	3678	52.0	-42 21	9.6	8.9	A3	7	..	18289b	61	2085	52.3	-22 29	9.6	9.2	Ao	2	..	44381b
12	3416	52.0	-47 54	9.8	10.3	Ko	1	..	18300b	62	4030	52.3	-35 39	8.3	7.7	B8	4	0,7	8897b
13	3175	52.0	-49 25	8.5	8.3	B9	7	..	18300b	63	3545	52.3	-41 34	9.2	9.8	Ko	3	..	18289b
14	3174	52.0	-49 35	9.6	9.5	Ko	2	..	18300b	64	3543	52.3	-41 49	10.1	9.8	A2	3	..	18289b
15	2761	52.0	-51 57	9.4	10.0	A2	3	..	24598b	65	3686	52.3	-42 4	10.2	10.4	F5	1	..	18289b
16	1346	52.0	-57 19	8.8	8.9	A	3	..	40088b	66	3685	52.3	-42 44	10.9	10.1	A2	1	..	18289b
17	769	52.0	-64 46	8.8	9.6	G5	3	..	15274b	67	3569	52.3	-46 19	10.9	9.6	Ao	3	..	18300b
18	477	52.0	-76 31	8.3	8.4	A2	9	..	20652b	68	3420	52.3	-47 50	10.9	10.3	Ao	1	..	18300b
19	478	52.0	-76 54	8.7	9.3	Go	7	..	20652b	69	3308	52.3	-48 22	9.4	9.5	F8	2	..	18300b
20	1203	52.1	+53 38	8.8	9.2	F5	2	..	38188i	70	1018	52.3	-58 18	7.6	8.1	Go	6	..	40088b
21	1876	52.1	+7 6	7.30	8.08	G5	5	..	37553i	71	773	52.3	-64 26	9.5	9.5	Ao	3	..	15274b
22	1831	52.1	+2 48	8.5	9.3	G5	2	..	37560i	72	113	52.4	+85 59	7.34	8.12	G5	4	..	37546i
23	1959	52.1	+1 25	6.44	6.94	F8	8	0,7	12774b	73	1832	52.4	+6 41	8.7	8.7	Ao	3	0,3	20709b
24	2294	52.1	-9 23	9.1	9.2	A3	2	..	15262b	74	1851	52.4	+2 55	8.1	8.6	F8	2	..	37560i
25	2229	52.1	-12 40	7.34	8.41	K2	7	2,2	20896b	75	1865	52.4	-1 2	7.9	9.3	Ma	1	..	15244b
26	2144	52.1	-15 51	9.0	9.6	Go	1	..	18976b	76	1900	52.4	-1 20	8.1	7.9	B	4	R	12774b
27	2205	52.1	-16 22	7.7	8.8	K2	3	..	18976b	77	2176	52.4	-11 10	9.4	9.7	Fo	3	..	15262b
28	2204	52.1	-16 30	9.6	9.6	Ao	2	..	18976b	78	2095	52.4	-18 28	9.4	9.4	Ao	1	..	18976b
29	6206	52.1	-24 35	10.9	9.8	Ko	2	..	44433b	79	6533	52.4	-23 14	10.4	9.8	G5	3	..	44433b
30	5224	52.1	-26 48	8.9	9.5	Ko	1	..	44428b	80	6532	52.4	-23 38	10.0	9.2	Ao	2	..	44381b
31	4751	52.1	-27 55	7.16	7.7	B9	8	..	44428b	81	5302	52.4	-25 9	8.0	8.9	K2	3	R	44429b
32	3680	52.1	-42 11	9.8	9.8	K2	2	..	18289b	82	5121	52.4	-28 52	10.2	9.2	B8	3	..	44428b
33	3860	52.1	-45 2	10.5	10.2	F2	2	..	18300b	83	5189	52.4	-30 1	6.36	8.4	Mb	6	..	42909b
34	3041	52.1	-50 18	8.0	8.4	F8	6	..	18300b	84	3834	52.4	-38 51	8.9	8.9	B8	5	..	18435b
35	3042	52.1	-50 59	9.2	10.9	K	1	..	24598b	85	3688	52.4	-42 34	9.8	8.6	Ao	6	..	18289b
36	492	52.2	+70 8	9.0	9.0	A	2	..	37713i	86	3734	52.4	-43 31	8.2	8.7	Ko	7	..	18289b
37	1516	52.2	+45 7	8.4	8.9	F8	3	..	37704i	87	3570	52.4	-46 24	8.0	8.7	Ko	6	2,4	18300b
38	1658	52.2	+29 29	9.4	9.4	Ao	2	..	37569i	88	3572	52.4	-47 3	7.3	8.5	K5	7	..	18300b
39	1844	52.2	+5 33	7.9	8.4	F8	3	..	37553i	89	1333	52.4	-52 19	6.38	6.9	B9	9	..	8952b
40	2375	52.2	-6 41	9.1	9.2	A2	2	..	15262b	90	1434	52.4	-54 34	9.5	9.5	A	3	E	24598b
41	2206	52.2	-16 16	7.19	7.61	F5	8	..	18976b	91	908	52.4	-62 7	7.6	8.4	G5	4	..	15516b
42	2093	52.2	-18 38	8.7	8.7	Ao	5	..	18976b	92	832	52.4	-63 30	9.0	9.5	F8	2	..	15516b
43	2084	52.2	-22 44	7.9	7.7	B9	3	0,2	11036b	93	1081	52.5	+58 35	9.2	9.7	F8	1	..	37409i
44	4753	52.2	-28 1	9.5	8.9	B9	4	..	44428b	94	1791	52.5	+42 34	8.9	10.1	K5	1	..	37463i
45	5177	52.2	-29 5	10.2	8.9	B9	4	..	44428b	95	1790	52.5	+42 3	8.6	9.6	Ko	1	..	37463i
46	5298	52.2	-30 39	9.0	8.3	Ao	5	..	42909b	96	1689	52.5	+26 18	9.0	9.5	F8	3	..	37503i
47	3829	52.2	-38 4	8.3	7.7	B8	3	..	8897b	97	1728	52.5	+12 18	8.3	8.3	Ao	3	2,2	37552i
48	3540	52.2	-41 8	9.9	9.8	Go	3	..	18289b	98	2360	52.5	-2 41	7.7	8.9	K5	2	..	12774b
49	3542	52.2	-41 28	9.3	10.1	K2	1	..	18289b	99	2273	52.5	-7 32	7.46	7.46	Ao	7	..	38629i
50	3683	52.2	-42 50	10.5	9.8	A2	2	..	18289b	100	2177	52.5	-11 43	9.1	9.1	Ao	3	..	20896b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

65200

7<sup>h</sup> 52<sup>m</sup>.5

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	2315	52.5	-13 8	8.4	8.0	F8	4	..	20896b	51	1388	52.7	-55 6	9.27	9.5	A	3	E	24598b
2	2244	52.5	-17 57	9.6	9.7	A2	1	..	18976b	52	1019	52.7	-58 28	8.1	8.7	Go	3	..	40088b
3	6213	52.5	-24 35	10.7	9.8	Ko	1	..	44429b	53	913	52.7	-61 46	9.1	9.6	Fo	1	..	15516b
4	5305	52.5	-25 8	9.2	8.9	F5	3	R	44429b	54	1724	52.8	+34 10	7.79	7.79	Ao	6	..	37569i
5	5306	52.5	-26 4	8.7	9.2	K5	3	0,2	44428b	55	1705	52.8	+31 0	8.4	8.8	F5	2	..	37448i
6	4764	52.5	-27 13	10.2	9.3	A2	2	..	44428b	56	1719	52.8	+17 38	9.4	9.4	Ao	2	..	37552i
7	4765	52.5	-27 40	10.7	9.2	A5	2	..	44428b	57	1598	52.8	+16 46	6.18	7.18	Ko	7	0,7 R	37552i
8	4762	52.5	-27 56	10.2	8.9	B9	4	..	44428b	58	1845	52.8	+5 17	7.9	8.7	G5	3	..	37553i
9	5306	52.5	-30 36	8.5	8.3	B9	5	..	42909b	59	2376	52.8	-6 55	9.2	9.3	A2	3	..	44419b
10	3546	52.5	-41 8	9.5	9.8	G5	3	..	18289b	60	2307	52.8	-10 41	9.4	9.5	A2	2	..	15262b
11	3737	52.5	-43 35	6.04	6.0	B5	..	3,9	56,124	61	2179	52.8	-11 49	9.1	10.1	Ko	2	..	20896b
12	3869	52.5	-44 30	9.8	9.0	Ao	3	..	18300b	62	2207	52.8	-16 36	9.1	9.1	Ao	2	..	18976b
13	3568	52.5	-45 25	10.9	10.2	F2	2	..	18300b	63	2208	52.8	-16 44	9.6	9.6	A	1	..	18976b
14	3578	52.5	-46 8	11.5	10.2	A5	1	..	18300b	64	2090	52.8	-22 11	8.9	10.0	K5	1	..	44381b
15	3311	52.5	-48 24	9.4	10.7	Ko	1	..	18300b	65	2089	52.8	-22 37	9.6	9.5	F8	3	..	44433b
16	834	52.5	-63 23	8.4	9.0	Go	6	..	15516b	66	6552	52.8	-23 27	11.2	10.0	A3	1	..	44433b
17	228	52.6	+82 45	9.5	9.9	F5	2	..	37546i	67	5241	52.8	-27 2	9.0	9.7	K5	1	..	44428b
18	1237	52.6	+55 44	8.4	8.9	F8	2	..	37409i	68	4769	52.8	-27 18	10.9	9.5	A2	1	..	44428b
19	1510	52.6	+46 53	7.84	8.40	Go	5	..	37704i	69	3554	52.8	-41 22	10.8	9.8	F5	2	..	18289b
20	1807	52.6	+13 36	7.7	8.5	G5	4	..	37552i	70	3574	52.8	-45 43	7.1	7.1	B5	..	4,5	56,124
21	1862	52.6	+4 47	8.60	9.60	Ko	1	..	37560i	71	3583	52.8	-46 37	11.5	10.3	A2	1	..	18300b
22	2142	52.6	+0 34	8.1	8.2	A3	4	1,2	12774b	72	3425	52.8	-47 47	10.0	9.8	G5	2	..	18300b
23	2148	52.6	-8 16	9.1	9.2	A3	2	..	44419b	73	1468	52.8	-57 2	5.50	7.2	K2	4	..	42171b
24	2298	52.6	-9 33	8.7	9.2	F8	3	..	15262b	74	1698	52.9	+44 36	9.2	9.6	F5	2	..	37704i
25	2304	52.6	-10 30	8.3	9.3	Ko	3	..	15262b	75	1722	52.9	+34 58	7.67	9.02	Ma	5	..	37569i
26	2292	52.6	-14 15	8.1	8.1	Ao	4	..	18976b	76	1627	52.9	+33 20	8.6	9.6	Ko	1	..	37448i
27	2088	52.6	-22 33	9.2	9.2	Go	3	..	44433b	77	1866	52.9	-0 32	8.3	9.4	K2	5	0,2	15244b
28	2087	52.6	-22 37	4.35	4.85	F8	..	2, R	28,201	78	1903	52.9	-1 23	9.0	9.1	A5	4	2,2	15244b
29	6215	52.6	-24 52	10.9	9.3	Ao	1	..	44429b	79	2378	52.9	-6 20	7.9	9.1	K5	3	..	15262b
30	5312	52.6	-25 20	9.2	9.0	G5	3	..	44429b	80	2301	52.9	-9 55	9.4	9.7	Fo	3	..	15262b
31	5131	52.6	-28 50	9.7	9.2	B9	2	..	44428b	81	2247	52.9	-17 41	8.9	9.0	A3	5	..	18976b
32	5307	52.6	-30 12	9.35	9.2	F8	3	..	44428b	82	2153	52.9	-19 33	8.9	9.2	F8	3	..	18976b
33	4035	52.6	-35 17	9.3	9.2	F8	2	..	18435b	83	4772	52.9	-28 0	10.7	9.8	G5	2	..	44428b
34	4061	52.6	-37 44	9.3	9.8	A2	3	..	18435b	84	5207	52.9	-29 5	10.0	9.2	A2	4	..	44428b
35	3549	52.6	-41 39	9.3	8.9	F2	6	..	18289b	85	5203	52.9	-29 15	10.0	9.2	A2	4	..	44428b
36	3696	52.6	-42 56	10.5	9.5	B9	3	..	18289b	86	5316	52.9	-30 7	9.55	8.6	Ao	4	..	42909b
37	3693	52.6	-43 2	10.0	9.8	G5	2	..	18289b	87	5315	52.9	-30 59	10.0	9.2	B8	3	..	42909b
38	689	52.6	-68 46	8.7	9.9	K5	1	..	15274b	88	3555	52.9	-41 44	10.6	9.8	A2	3	..	18289b
39	1592	52.7	+48 4	8.0	8.8	G5	3	..	37704i	89	3703	52.9	-42 58	9.2	8.9	A2	3	2,7	8897b
40	1959	52.7	+20 51	8.8	8.8	Ao	4	..	37605i	90	3743	52.9	-43 20	10.5	8.8	B9	7	..	18289b
41	1879	52.7	+7 29	6.31	6.29	B9	8	..	37553i	91	3744	52.9	-43 23	10.5	9.4	B8	4	..	18289b
42	1864	52.7	+4 9	9.0	9.4	F5	3	..	37560i	92	3741	52.9	-43 46	10.5	9.4	Ao	3	..	18289b
43	2293	52.7	-14 20	7.9	8.5	Go	3	..	18976b	93	3871	52.9	-44 39	9.4	9.0	Ao	5	..	18300b
44	5313	52.7	-30 16	9.5	8.9	A2	3	..	42909b	94	3050	52.9	-50 6	9.6	9.2	Ao	3	..	18300b
45	3797	52.7	-39 46	10.8	10.1	Ao	1	..	18289b	95	3049	52.9	-50 27	9.1	9.0	Go	3	..	18300b
46	3553	52.7	-41 39	9.5	9.2	A5	6	..	18289b	96	3051	52.9	-50 54	10.0	10.7	Ko	2	..	24598b
47	3700	52.7	-42 36	9.8	9.8	F5	4	..	18289b	97	1480	52.9	-53 22	7.4	8.9	Ko	7	..	24598b
48	3870	52.7	-44 21	7.7	7.5	B8	..	3,5	56,124	98	932	52.9	-59 38	9.3	9.3	A	2	..	40088b
49	1335	52.7	-52 38	7.7	6.9	F2	4	..	8952b	99	169	53.0	+84 21	6.39	6.39	Ao	8	..	37546i
50	1435	52.7	-54 23	7.9	8.6	Ko	7	..	24598b	100	311	53.0	+77 23	8.8	9.2	F5	3	..	38187i

## THE HENRY DRAPER CATALOGUE.

JOHN G. VAN DER KAM  
HARVARD COLLEGE  
CAMBRIDGE, MASS.  
1912

65300

7<sup>h</sup> 53<sup>m</sup>.0

H.D.	DM.	R.A. 1900	Dec. 1900	Ptn.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptn.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1130	53.0	+59 20	5.79	6.13	F2	9	..	37676i	51	2103	53.2	-18 52	8.3	9.3	Ko	4	..	18976b
2	1381	53.0	+50 56	8.6	9.1	F8	1	..	38188i	52	6234	53.2	-24 15	8.0	8.3	Ao	4	0,6	11036b
3	1813	53.0	+37 22	8.0	8.1	A2	4	..	37448i	53	5255	53.2	-26 40	8.9	8.7	A2	6	..	44428b
4	1626	53.0	+30 43	8.4	9.2	G5	2	..	37569i	54	4128	53.2	-34 7	6.86	8.0	K2	5	..	42909b
5	1881	53.0	+7 15	8.7	8.8	A2	2	0,2	20709b	55	4043	53.2	-36 39	8.3	8.6	Go	3	..	42909b
6	2312	53.0	-5 40	9.1	9.2	A5	2	..	44419b	56	3806	53.2	-39 40	9.2	9.2	A2	4	..	18289b
7	2151	53.0	-8 34	9.1	8.9	B3	4	..	44419b	57	3561	53.2	-41 13	9.5	9.5	K2	3	..	18289b
8	2211	53.0	-16 51	9.8	9.8	Ao	2	..	18976b	58	3562	53.2	-41 29	9.2	9.5	Ko	4	..	18289b
9	2091	53.0	-22 49	10.5	9.6	Ao	3	..	44433b	59	3710	53.2	-42 27	9.4	8.9	A2	8	..	18289b
10	R	53.0	-22 58	10.7	9.8	A2	3	..	44433b	60	3588	53.2	-47 3	8.3	8.1	Ao	2	..	8952b
11	5144	53.0	-28 58	9.2	9.2	F8	2	..	44428b	61	3432	53.2	-47 33	9.8	10.3	Ko	1	..	18300b
12	5209	53.0	-29 27	10.0	9.5	G	2	..	44428b	62	3318	53.2	-48 44	9.0	8.7	Ao	6	..	18300b
13	5210	53.0	-29 29	9.7	9.2	Ao	3	..	44428b	63	3320	53.2	-48 49	10.5	9.8	B9	3	..	18300b
14	3656	53.0	-40 19	8.9	9.5	Ko	4	..	18289b	64	1338	53.2	-52 29	9.3	9.3	B9	4	..	24598b
15	3655	53.0	-40 28	6.32	7.3	B2	4	..	42928b	65	1117	53.3	+57 13	8.6	9.1	F8	3	..	37409i
16	3557	53.0	-41 42	10.1	8.9	Ao	7	..	18289b	66	1268	53.3	+51 59	9.0	9.8	G5	1	..	38188i
17	3746	53.0	-43 59	10.2	9.1	A3	4	..	18289b	67	1696	53.3	+49 41	8.9	9.3	F5	2	..	37344i
18	3586	53.0	-46 46	10.0	10.3	G5	1	..	18300b	68	1757	53.3	+43 15	8.9	9.5	Go	2	..	37704i
19	1481	53.0	-53 31	9.1	10.1	G5	2	..	24598b	69	1764	53.3	+41 41	7.70	8.77	K2	3	..	37704i
20	1392	53.0	-55 15	9.2	9.2	A	4	E	24598b	70	1629	53.3	+32 58	8.5	9.6	K2	1	..	37448i
21	918	53.0	-61 36	7.3	9.1	Ma	3	..	15516b	71	1677	53.3	+10 24	8.1	9.1	Ko	4	E	20710b
22	68	53.0	-88 35	7.75	6.5	Ao	6	1,4	22566b	72	1860	53.3	+3 12	6.53	6.61	A3	7	0,7	37560i
23	1513	53.1	+28 46	8.8	9.6	G5	2	..	37569i	73	1836	53.3	+2 1	10.4	11.0	Go	2	..	15244b
24	1730	53.1	+21 27	8.4	8.4	Ao	5	..	37605i	74	2307	53.3	-9 22	9.1	10.1	Ko	2	..	44419b
25	2313	53.1	-5 47	9.1	9.2	A2	2	..	15262b	75	2309	53.3	-10 37	7.9	8.9	Ko	4	E	20896b
26	2380	53.1	-7 1	9.1	9.1	Ao	3	..	44419b	76	2302	53.3	-14 26	9.2	9.2	Ao	2	..	18976b
27	2278	53.1	-7 22	8.7	8.8	A5	4	..	44419b	77	5216	53.3	-29 27	9.5	9.2	G5	2	..	44428b
28	2181	53.1	-11 37	9.4	9.8	F5	2	5,2	44419b	78	4612	53.3	-32 59	7.15	7.7	B9	7	..	12788b
29	2152	53.1	-16 2	9.2	9.2	A	3	..	18976b	79	4130	53.3	-34 57	8.05	8.3	Ko	4	..	42909b
30	5146	53.1	-28 15	9.3	10.0	K5	1	..	44428b	80	3807	53.3	-39 22	9.5	9.5	Fo	2	..	18289b
31	4041	53.1	-36 31	8.9	9.0	Fo	2	..	18435b	81	3805	53.3	-39 57	9.15	9.5	G5	3	..	18289b
32	3560	53.1	-41 39	8.9	9.2	G5	4	..	18289b	82	3659	53.3	-40 59	9.3	10.1	K2	3	..	18289b
33	3708	53.1	-42 55	11.5	9.8	A2	3	..	18289b	83	3714	53.3	-43 1	10.0	8.9	Ao	7	..	18289b
34	3875	53.1	-44 19	10.0	9.6	A2	2	..	18300b	84	3878	53.3	-44 55	9.54	9.8	A5	3	..	18300b
35	3429	53.1	-47 34	10.5	9.9	Ao	2	..	18300b	85	3436	53.3	-47 59	8.9	9.0	Go	5	..	18300b
36	1337	53.1	-52 51	8.5	9.2	Ko	5	..	24598b	86	3324	53.3	-48 29	10.9	10.0	Ao	3	..	18300b
37	1349	53.1	-57 19	8.7	9.0	A	2	..	40088b	87	1022	53.3	-58 21	10.2	10.2	A	1	..	40088b
38	1021	53.1	-58 20	9.0	9.6	K5	1	..	40088b	88	913	53.3	-62 38	9.1	9.4	F2	1	..	15516b
39	1105	53.2	+60 36	6.00	6.06	A2p	9	R	37676i	89	776	53.3	-64 41	8.9	9.0	A2	5	..	15274b
40	1207	53.2	+53 16	9.4	10.2	G5	1	..	38188i	90	1188	53.4	+54 43	6.84	6.92	A3	6	2,5	38188i
41	1706	53.2	+31 46	8.6	8.6	Ao	4	..	37569i	91	1725	53.4	+36 35	8.7	9.2	F8	2	..	37448i
42	1732	53.2	+12 43	8.4	8.8	F5	2	..	37552i	92	1726	53.4	+36 21	6.53	7.71	K5	6	0,6	37448i
43	1733	53.2	+12 23	7.9	8.7	G5	2	..	37552i	93	1805	53.4	+25 12	8.6	8.7	A3	3	..	37503i
44	1885	53.2	+7 50	9.0	9.0	Ao	2	..	20709b	94	1734	53.4	+11 58	8.1	8.7	Go	2	..	37552i
45	1833	53.2	+2 29	5.40	6.40	Ko	8	0,9	38370i	95	1928	53.4	+8 44	7.36	8.14	G5	3	..	37553i
46	2363	53.2	-2 18	9.1	9.1	Ao	3	..	12774b	96	1840	53.4	+5 54	6.78	6.76	B9	8	..	37553i
47	2279	53.2	-7 8	9.1	9.6	F8	2	..	44419b	97	2315	53.4	-5 49	9.1	9.2	A3	3	..	15262b
48	2154	53.2	-8 29	9.1	9.1	Ao	4	..	44419b	98	5260	53.4	-26 42	10.7	9.5	A5	2	..	44428b
49	2182	53.2	-11 35	8.5	8.9	F5	6	..	20896b	99	4789	53.4	-28 4	9.5	9.2	Go	2	..	44428b
50	2301	53.2	-14 20	8.5	9.5	Ko	2	..	18976b	100	5157	53.4	-28 19	10.0	9.8	Go	1	..	44428b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

65400

7<sup>h</sup> 53<sup>m</sup>.4

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	4614	53.4	-32 52	7.4	8.6	K5	2	..	12788b	51	1869	53.7	+ 3 58	9.4	9.4	Ao	1	..	15244b
2	4051	53.4	-35 7	8.15	8.6	Ao	5	..	42909b	52	1965	53.7	+ 0 55	9.7	9.7	Ao	3	..	15244b
3	3850	53.4	-39 2	8.9	9.2	B8	5	..	18435b	53	2145	53.7	+ 0 17	8.3	9.3	Ko	2	0,1-	12774b
4	2768	53.4	-51 23	8.6	9.0	A2	6	..	24598b	54	2096	53.7	-22 29	9.1	9.5	K2	2	..	44381b
5	924	53.4	-60 17	8.5	8.4	Ao	6	..	15516b	55	5172	53.7	-28 34	10.7	9.5	A2	2	..	44428b
6	1343	53.5	+45 55	8.6	9.8	K5	1	..	37463i	56	5236	53.7	-30 4	4.85	5.4	A2	..	0,8	28,201
7	1765	53.5	+41 4	8.0	8.8	G5	2	..	37704i	57	4056	53.7	-35 30	8.9	9.2	Ao	3	..	42909b
8	1804	53.5	+18 49	9.2	9.3	A3	2	..	37605i	58	3676	53.7	-40 5	9.5	9.5	B9	3	..	18289b
9	2146	53.5	- 3 22	7.9	7.9	Ao	3	E	38207i	59	3722	53.7	-42 7	8.8	8.9	Ao	8	..	18289b
10	2383	53.5	- 6 7	7.7	7.7	Ao	5	..	38629i	60	3758	53.7	-43 14	5.42	5.25	B3	..	2,R	56,124
11	2304	53.5	-14 22	7.7	8.9	K5	4	..	18976b	61	3591	53.7	-45 47	8.5	8.2	Go	6	R	18300b
12	2302	53.5	-20 9	7.83	9.2	Ma	3	..	18976b	62	3591	53.7	-45 47	8.5	8.2	A2	6	R	18300b
13	2300	53.5	-20 15	9.18	9.6	F2	2	..	18976b	63	3441	53.7	-47 42	10.5	9.9	B9	2	..	18300b
14	2192	53.5	-21 28	9.2	9.6	Fo	1	..	44381b	64	3330	53.7	-48 11	10.5	9.5	A2	3	..	18300b
15	5336	53.5	-25 55	9.7	8.9	Ao	3	..	44429b	65	3329	53.7	-48 55	9.1	9.0	Go	5	..	18300b
16	5262	53.5	-26 48	10.7	9.3	Ao	2	..	44428b	66	935	53.7	-60 3	9.1	9.0	Ao	1	..	15516b
17	5161	53.5	-28 4	8.7	8.6	A2	8	..	44428b	67	927	53.7	-60 35	9.1	9.1	Ao	2	..	15516b
18	5228	53.5	-29 11	10.2	9.5	A5	2	..	44428b	68	1131	53.8	+59 3	8.5	8.9	F5	4	0,2	37409i
19	3853	53.5	-38 58	8.6	9.2	B9	4	..	18435b	69	1264	53.8	+56 7	8.6	8.6	Ao	2	..	37676i
20	3810	53.5	-39 45	10.1	10.1	Ao	2	..	18289b	70	1710	53.8	+31 50	8.6	9.7	K2	1	..	37448i
21	3716	53.5	-42 47	10.5	8.9	Ko	4	..	18289b	71	1863	53.8	+23 28	6.86	7.86	Ko	6	..	37605i
22	3884	53.5	-44 46	9.8	9.6	A2	4	..	18300b	72	1864	53.8	+23 20	8.2	9.4	K5	2	..	37503i
23	3327	53.5	-48 30	10.0	10.0	Ko	1	..	18300b	73	1797	53.8	+14 5	7.9	8.7	G5	3	..	37552i
24	3201	53.5	-49 43	7.6	9.5	Nb	2	..	18300b	74	1809	53.8	+13 9	9.7	10.7	Ko	1	..	37552i
25	2769	53.5	-51 4	6.6	7.6	Ko	3	..	8952b	75	1933	53.8	+ 8 14	8.5	9.3	G5	2	5,1	20710b
26	1023	53.5	-58 14	9.4	10.4	K	1	..	40088b	76	1891	53.8	+ 7 30	8.7	9.5	G5	2	..	20710b
27	838	53.5	-67 12	8.9	9.5	Go	3	..	15274b	77	1841	53.8	+ 6 36	8.3	8.6	Fo	4	..	37553i
28	839	53.5	-67 45	8.5	9.1	Go	4	..	15274b	78	1907	53.8	- 1 20	9.0	10.0	Ko	2	..	15244b
29	1021	53.6	+61 16	6.70	7.04	F2	6	..	37676i	79	2158	53.8	- 4 40	8.4	9.6	K5	2	..	12774b
30	1731	53.6	+21 9	8.6	9.4	G5	4	..	37605i	80	2318	53.8	- 5 25	9.1	10.1	Ko	1	..	15262b
31	1722	53.6	+17 6	7.4	7.9	F8	4	..	37605i	81	2247	53.8	-12 42	8.3	9.5	K5	2	..	20896b
32	1721	53.6	+15 5	8.7	9.2	F8	3	..	37552i	82	2162	53.8	-19 24	8.9	9.6	Ko	2	..	18976b
33	1931	53.6	+ 8 26	8.5	8.5	Ao	4	..	20710b	83	2163	53.8	-19 39	8.9	9.5	G5	3	..	18976b
34	1867	53.6	+ 4 51	9.11	9.11	Ao	1	..	37560i	84	2097	53.8	-22 42	9.2	8.9	Ao	4	..	44381b
35	2252	53.6	-17 29	8.9	9.5	Go	3	..	18976b	85	6243	53.8	-24 32	10.0	9.7	Ma	1	..	44381b
36	2108	53.6	-19 0	8.1	8.9	G5	4	..	18976b	86	5342	53.8	-25 21	8.45	9.2	Ko	3	..	44429b
37	4797	53.6	-27 19	10.0	9.5	G5	1	..	44428b	87	5269	53.8	-26 8	9.7	8.9	B9	3	..	44429b
38	3859	53.6	-38 9	8.6	8.7	A2	2	..	8897b	88	4084	53.8	-37 4	7.5	9.2	K2	2	..	42909b
39	3860	53.6	-38 46	8.6	9.8	Ko	2	..	18435b	89	3817	53.8	-39 45	8.4	8.9	A3	6	..	18289b
40	3673	53.6	-40 56	8.0	8.0	B8	4	..	8897b	90	3724	53.8	-42 40	11.5	10.1	Ao	2	..	18289b
41	3565	53.6	-41 23	7.9	8.1	Ao	5	..	8897b	91	3760	53.8	-43 13	7.6	7.8	G5	3	..	8897b
42	3717	53.6	-42 8	5.95	7.4	K2	3	3,2-	42977b	92	3442	53.8	-47 12	8.2	7.8	Ao	2	..	8952b
43	3718	53.6	-43 0	10.2	9.2	Ao	5	..	18289b	93	1443	53.8	-54 6	8.0	8.3	Ao	8	..	24598b
44	3598	53.6	-46 12	10.0	9.3	B8	3	..	18300b	94	1441	53.8	-54 47	8.0	8.9	Ko	5	..	24598b
45	3596	53.6	-46 57	10.9	10.3	Ao	2	..	18300b	95	769	53.8	-66 48	9.2	9.8	Go	2	..	15274b
46	1482	53.6	-53 49	8.7	9.2	A2	4	..	24598b	96	691	53.8	-68 38	8.5	9.5	Ko	1	..	15274b
47	750	53.7	+63 23	8.4	8.9	F8	2	..	37676i	97	607	53.9	+65 25	7.56	7.90	F2	7	..	37713i
48	749	53.7	+63 21	6.04	6.54	F8	9	..	37676i	98	1795	53.9	+42 25	9.5	10.1	G	1	R	37463i
49	1083	53.7	+58 20	8.8	9.6	G5	2	..	37409i	99	2146	53.9	+ 0 52	9.04	10.22	K5	1	..	15244b
50	1722	53.7	+15 39	7.8	8.8	Ko	3	..	37552i	100	1874	53.9	- 0 10	7.98	8.04	A2	5	1,4	12774b



## THE HENRY DRAPER CATALOGUE.

65500

7<sup>h</sup> 53<sup>m</sup>.9

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	2286	53.9	- 8 4	8.9	9.3	F5	1	..	15262b	51	3766	54.1	-43 50	5.10	4.93	B3	..	5,8 R	56,124
2	2311	53.9	- 9 48	8.1	8.1	B9	7	..	15262b	52	3598	54.1	-45 18	9.4	9.0	A0	4	..	18300b
3	2309	53.9	-14 58	8.71	9.71	K0	1	..	18976b	53	3334	54.1	-49 0	7.1	8.6	K0	7	..	18300b
4	2157	53.9	-15 28	9.1	9.1	A0	4	..	18976b	54	930	54.1	-60 12	9.16	8.7	A2	2	..	15516b
5	2257	53.9	-17 55	8.6	8.9	F2	5	..	18976b	55	839	54.1	-65 57	9.1	9.9	G5	2	..	15274b
6	2164	53.9	-19 14	8.5	9.2	K0	4	..	18976b	56	1522	54.2	+45 5	8.6	8.9	F0	2	..	37704i
7	2305	53.9	-20 20	8.5	8.9	A5	6	5,4	44429b	57	1801	54.2	+13 58	7.7	8.1	F5	3	..	37552i
8	2099	53.9	-22 44	8.7	8.6	A2	6	..	44381b	58	2163	54.2	- 8 41	9.4	9.7	F0	2	..	44419b
9	6248	53.9	-24 29	10.4	9.2	G0	4	..	44433b	59	2162	54.2	- 8 54	9.2	9.3	A3	3	..	15262b
10	6247	53.9	-24 53	10.9	9.8	F0	2	..	44433b	60	2315	54.2	-10 58	8.9	8.9	A0	3	E	20896b
11	4804	53.9	-27 33	7.9	8.4	B8	5	..	44428b	61	2187	54.2	-11 15	8.5	8.5	A0	4	E	20896b
12	5299	53.9	-31 38	8.7	8.9	F2	3	..	42909b	62	2252	54.2	-13 2	8.7	9.7	K0	2	..	20896b
13	3819	53.9	-39 14	9.3	9.2	A2	3	..	18289b	63	2161	54.2	-15 23	7.70	8.70	K0	4	..	18976b
14	3569	53.9	-41 20	10.3	9.8	F5	3	..	18289b	64	2110	54.2	-18 23	8.5	8.5	B9	4	..	18976b
15	3332	53.9	-48 23	8.8	9.2	K0	5	..	18300b	65	2168	54.2	-19 10	8.5	9.5	G5	2	..	18976b
16	1342	53.9	-52 12	9.1	9.2	F8	6	..	24598b	66	2197	54.2	-21 13	8.5	9.1	G5	2	R	44381b
17	236	53.9	-81 43	7.84	7.4	A2	6	..	20869b	67	2100	54.2	-22 55	9.6	9.2	A3	2	..	44381b
18	1106	54.0	+60 42	8.4	9.0	G0	6	..	37676i	68	6594	54.2	-23 25	10.4	9.8	A0	2	..	44433b
19	1766	54.0	+41 14	9.7	9.8	A3	1	..	37463i	69	6254	54.2	-24 40	9.5	9.2	F5	2	..	44381b
20	1725	54.0	+17 24	8.7	8.7	A0	2	..	37552i	70	5343	54.2	-30 59	8.3	8.6	B8	5	..	42909b
21	1723	54.0	+15 21	9.0	9.1	A3	3	..	37552i	71	4096	54.2	-37 44	9.5	9.5	F0	2	..	18435b
22	1811	54.0	+13 30	6.20	7.38	K5	7	5,7	37552i	72	3577	54.2	-41 30	10.8	10.1	G0	1	..	18289b
23	1810	54.0	+13 16	8.7	9.5	G5	3	..	37552i	73	3731	54.2	-43 0	9.1	8.9	F2	8	..	18289b
24	1682	54.0	+10 12	7.9	8.3	F5	3	..	37553i	74	3214	54.2	-49 27	10.5	10.4	K5	1	..	18300b
25	1848	54.0	+ 5 32	7.8	8.6	G5	4	..	37553i	75	1343	54.2	-52 43	3.60	3.43	B3	..	2, R	28,201
26	2151	54.0	- 4 3	6.77	6.85	A3	5	..	38207i	76	1485	54.2	-53 8	9.1	10.4	K0	2	..	24598b
27	2388	54.0	- 6 24	9.1	9.7	G0	2	..	15262b	77	1486	54.2	-53 50	9.8	10.1	F0	2	..	24598b
28	2287	54.0	- 7 15	8.7	9.5	G5	2	..	44419b	78	932	54.2	-60 54	8.0	8.1	A0	3	0,5	8913b
29	2313	54.0	-10 40	8.7	8.8	A2	3	..	20896b	79	843	54.2	-67 53	9.3	9.4	A2	3	..	15274b
30	2314	54.0	-10 46	8.7	9.9	K5	1	..	44419b	80	517	54.3	+67 57	7.82	8.82	K0	4	..	37713i
31	2109	54.0	-18 50	9.4	9.5	A2	2	..	18976b	81	969	54.3	+62 18	9.2	9.2	A0	2	..	37676i
32	4145	54.0	-34 31	9.9	8.9	A5	3	..	42909b	82	1240	54.3	+54 53	8.11	8.11	A0	3	2,2	38188i
33	4147	54.0	-34 40	8.3	9.2	K0	3	..	42909b	83	1664	54.3	+29 31	6.94	7.50	G0	6	R	37569i
34	3680	54.0	-41 3	10.3	9.5	A2	4	..	18289b	84	1865	54.3	+23 22	9.4	9.7	F	1	..	37503i
35	3572	54.0	-41 11	10.6	10.1	F2	2	..	18289b	85	2164	54.3	- 8 17	8.5	9.1	G0	2	..	15262b
36	3762	54.0	-43 20	10.0	9.3	A0	6	..	18289b	86	2310	54.3	-14 35	8.5	8.5	B9	4	..	18976b
37	3763	54.0	-43 40	10.5	10.2	F5	2	..	18289b	87	2224	54.3	-16 47	7.76	8.94	K5	3	..	18976b
38	3893	54.0	-44 51	9.1	9.9	K0	2	..	18300b	88	6255	54.3	-24 32	9.3	9.2	K2	3	0,2	44433b
39	1025	54.0	-58 32	9.0	9.9	G5	1	..	40088b	89	5196	54.3	-28 52	9.2	9.7	K5	1	..	44428b
40	628	54.0	-71 22	9.0	9.1	A5	2	..	24527b	90	5311	54.3	-31 10	8.3	9.2	F5	3	..	42909b
41	312	54.1	+77 39	8.7	9.8	K2	2	..	38187i	91	4099	54.3	-37 45	9.9	9.5	G0	3	..	18435b
42	1978	54.1	+40 11	7.67	8.67	K0	3	0,3	37463i	92	3831	54.3	-39 51	7.50	8.0	G0	3	..	8897b
43	1727	54.1	+35 53	9.4	9.9	F8	1	..	37448i	93	3685	54.3	-41 0	8.3	9.5	Ma	4	..	18289b
44	1849	54.1	+ 5 48	8.4	8.9	F8	3	..	20709b	94	3576	54.3	-41 18	9.9	9.5	G5	3	..	18289b
45	2159	54.1	- 4 59	9.05	9.55	F8	2	..	15262b	95	3733	54.3	-42 12	10.9	10.1	A0	1	..	18289b
46	2160	54.1	- 8 41	9.1	9.6	F8	2	..	15262b	96	3732	54.3	-42 26	10.9	9.8	K2	2	..	18289b
47	2307	54.1	-20 32	9.8	9.6	A3	1	..	44429b	97	3610	54.3	-46 50	9.8	9.0	A0	6	..	18300b
48	6591	54.1	-23 19	10.0	8.7	B8	4	..	44433b	98	3457	54.3	-47 37	6.08	6.3	B5	..	4,4	28,201
49	6593	54.1	-23 49	10.0	8.9	B9	3	..	44381b	99	937	54.3	-59 58	9.42	8.4	A0	4	..	15516b
50	3871	54.1	-38 39	7.9	8.9	G5	4	..	18435b	100	473	54.3	-73 57	9.8	9.9	A2	1	..	22237b



## ANNALS OF HARVARD COLLEGE OBSERVATORY.

65600

7<sup>h</sup> 54<sup>m</sup>.4

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	970	54.4	+61 55	8.1	8.4	Fo	3	..	37676i	51	4816	54.6	-27 10	9.0	9.5	K5	1	..	40080b
2	1810	54.4	+25 18	8.0	8.0	Ao	5	..	37503i	52	4363	54.6	-33 20	7.22	8.3	K2	3	..	12788b
3	1843	54.4	+6 16	9.0	9.1	A2	3	..	20709b	53	4362	54.6	-33 27	8.3	9.2	K2	2	..	42909b
4	1852	54.4	+5 10	8.1	9.3	K5	1	..	37553i	54	3692	54.6	-40 46	10.3	10.1	A3	2	..	18289b
5	2160	54.4	-4 39	8.5	8.5	Ao	3	..	12774b	55	3585	54.6	-41 16	10.3	9.2	B8	6	..	18289b
6	2392	54.4	-6 12	9.1	9.6	F8	1	..	15262b	56	3583	54.6	-41 22	7.9	7.7	B5	6	..	8897b
7	2291	54.4	-7 14	8.3	8.4	A3	6	..	15262b	57	3781	54.6	-43 59	9.8	7.8	Ao	8	..	18289b
8	2317	54.4	-10 15	9.4	9.4	Ao	2	..	44419b	58	3616	54.6	-46 19	7.8	7.2	B5	3	3,2-	8952b
9	2188	54.4	-11 32	8.9	10.1	K5	2	..	44419b	59	3462	54.6	-47 7	10.2	9.6	A2	4	..	18300b
10	2328	54.4	-13 37	7.9	8.2	Fo	4	..	18976b	60	3461	54.6	-47 46	10.5	9.6	Ao	2	..	18300b
11	5356	54.4	-25 17	9.5	8.9	Ao	3	..	44429b	61	3219	54.6	-49 13	10.2	9.5	Ao	3	..	18300b
12	5288	54.4	-26 38	10.0	9.2	Ao	2	..	44428b	62	935	54.6	-60 15	5.59	7.7	K2	..	0,6	56,124
13	4811	54.4	-27 36	9.5	9.2	Ao	2	..	44428b	63	937	54.6	-60 50	7.0	6.9	B9	8	..	8913b
14	5351	54.4	-30 32	9.3	9.2	Ao	2	..	42909b	64	1771	54.7	+41 41	7.20	7.62	F5	5	..	37704i
15	4102	54.4	-37 18	7.5	6.9	B8	5	0,8	8897b	65	1696	54.7	+25 55	8.8	9.1	Fo	2	..	37503i
16	3579	54.4	-41 15	7.3	8.6	Ko	3	0,7	8897b	66	1896	54.7	+19 7	6.90	6.90	Ao	8	..	37605i
17	3734	54.4	-42 27	9.2	9.8	K5	3	..	18289b	67	1689	54.7	+10 9	8.7	9.1	F5	4	..	20710b
18	3775	54.4	-43 9	10.9	9.6	A	4	..	18289b	68	2150	54.7	+0 45	8.74	8.74	Ao	3	0,3-	24493b
19	3774	54.4	-43 12	10.5	9.1	A	2	..	18289b	69	2162	54.7	-4 55	8.35	8.49	A5	6	..	12774b
20	3776	54.4	-43 14	9.2	7.9	B9	4	..	8897b	70	2397	54.7	-6 21	8.5	9.6	K2	2	..	15262b
21	3605	54.4	-45 44	9.6	9.9	Ko	2	..	18300b	71	2294	54.7	-7 39	9.1	9.9	G5	2	..	44419b
22	3603	54.4	-46 4	7.5	6.7	B5	..	3,2-	56,124	72	2259	54.7	-13 3	8.7	8.8	A2	5	..	20896b
23	917	54.4	-62 5	8.7	8.7	B9	5	..	15516b	73	2227	54.7	-16 25	7.9	9.1	K5	2	..	18976b
24	692	54.4	-68 44	8.8	8.9	A3	4	..	15274b	74	2226	54.7	-16 34	8.0	8.0	Ao	5	..	18976b
25	263	54.5	+81 20	8.1	8.9	G5	3	..	37493i	75	2172	54.7	-20 5	8.28	9.2	K5	2	..	18976b
26	1118	54.5	+57 33	6.52	7.08	Go	7	..	37676i	76	2317	54.7	-20 49	9.1	9.5	Go	1	..	44429b
27	1524	54.5	+45 20	8.0	8.5	F8	3	..	37704i	77	6612	54.7	-23 9	10.2	9.8	G5	2	..	44433b
28	1736	54.5	+12 44	8.2	9.4	K5	1	..	37552i	78	5366	54.7	-26 2	10.0	9.2	Ao	2	..	44429b
29	1684	54.5	+10 11	7.9	8.7	G5	5	5,2	20710b	79	5208	54.7	-28 13	10.9	9.7	B9	1	..	44428b
30	1842	54.5	+2 53	9.0	9.1	A2	1	..	37560i	80	5212	54.7	-28 23	10.2	9.2	F8	3	..	44428b
31	2394	54.5	-6 43	8.9	8.9	Ao	4	..	15262b	81	5272	54.7	-29 59	9.00	9.5	Ko	2	..	42909b
32	2166	54.5	-8 8	9.4	9.5	A2	3	..	15262b	82	5320	54.7	-32 2	8.5	8.6	A3	3	..	12788b
33	2318	54.5	-10 57	9.0	9.1	A2	2	E	20896b	83	3839	54.7	-39 20	7.9	7.7	Ao	4	R	8897b
34	2189	54.5	-11 49	9.1	9.1	A	2	E	44419b	84	3782	54.7	-44 1	10.2	9.3	A2	6	..	18289b
35	6264	54.5	-24 42	8.7	8.6	F8	5	..	44381b	85	3611	54.7	-45 18	5.16	7.0	K5	..	5,6 R	56,124
36	4814	54.5	-27 18	7.14	8.6	Ko	5	..	40080b	86	3608	54.7	-45 44	9.6	9.3	A5	4	..	18300b
37	5202	54.5	-28 37	10.2	9.2	A2	3	..	44428b	87	3609	54.7	-46 2	9.6	9.0	Ao	6	..	18300b
38	3691	54.5	-40 30	6.9	7.8	Ko	2	..	42928b	88	3341	54.7	-48 47	10.5	10.1	F8	2	..	18300b
39	3735	54.5	-42 12	10.9	10.1	B9	1	..	18289b	89	1448	54.7	-54 10	10.1	10.1	Ao	3	..	24598b
40	3064	54.5	-50 49	9.0	9.8	Ko	3	..	24598b	90	1472	54.7	-56 13	8.6	9.2	G5	3	..	40088b
41	1769	54.6	+41 9	7.55	8.33	G5	4	..	37704i	91	939	54.7	-60 32	8.8	9.0	Ao	3	..	15516b
42	1979	54.6	+40 41	8.1	8.9	G5	3	..	37463i	92	693	54.7	-68 52	8.3	9.5	K5	2	..	15274b
43	1606	54.6	+15 57	8.5	8.6	A5	4	R	37552i	93	1189	54.8	+54 47	8.51	9.69	K5	1	..	37409i
44	1843	54.6	+2 32	9.0	9.0	Ao	2	..	15244b	94	1738	54.8	+12 29	7.7	7.7	Ao	4	..	37553i
45	2395	54.6	-7 1	9.4	9.7	Fo	2	..	15262b	95	2157	54.8	-3 24	5.06	6.06	Ko	8	..	38207i
46	2317	54.6	-9 9	9.2	10.6	Mb	1	..	44419b	96	2400	54.8	-7 1	8.5	9.5	Ko	3	..	15262b
47	2319	54.6	-10 12	8.56	8.56	Ao	5	E	20896b	97	2200	54.8	-21 7	9.6	9.5	Ao	1	..	44429b
48	2114	54.6	-19 4	8.1	9.2	K2	3	..	18976b	98	2203	54.8	-21 49	7.9	9.2	K2	2	..	44381b
49	2102	54.6	-22 41	9.2	9.2	Ao	3	..	44381b	99	2104	54.8	-23 2	5.22	6.9	G5	..	0,9	28,201
50	6268	54.6	-24 32	10.0	8.9	F5	3	..	44381b	100	6616	54.8	-24 1	9.5	9.2	Ao	3	..	44429b

## THE HENRY DRAPER CATALOGUE.

65700

7<sup>h</sup> 54<sup>m</sup>.8

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	4819	54.8	-27 39	7.5	8.7	G5	5	..	40080b	51	1029	55.0	-58 59	9.6	9.6	Ao	3	..	40088b
2	5217	54.8	-28 46	9.0	8.9	Ao	4	..	40080b	52	785	55.0	-65 1	9.3	9.6	F2	2	..	15274b
3	5322	54.8	-31 48	9.5	9.5	Ao	1	..	42909b	53	231	55.1	+82 3	8.4	8.8	F5	3	..	37546i
4	4158	54.8	-34 21	9.3	8.9	Ao	2	..	18435b	54	394	55.1	+72 4	7.38	8.38	Ko	5	..	38187i
5	4063	54.8	-36 9	7.9	8.1	A2	3	3,5	8897b	55	1984	55.1	+40 26	7.96	8.46	F8	4	..	37463i
6	3740	54.8	-42 33	10.0	9.6	F5	5	..	18289b	56	1728	55.1	+34 54	9.17	9.23	A2	2	..	37448i
7	3738	54.8	-42 42	10.0	9.8	Ao	3	..	18289b	57	1866	55.1	+23 53	6.42	7.42	Ko	7	..	37605i
8	3787	54.8	-43 36	10.5	9.3	G5	4	..	18289b	58	1737	55.1	+21 19	8.6	8.6	Ao	3	..	37605i
9	3223	54.8	-49 18	10.0	9.8	Ao	4	..	18300b	59	1731	55.1	+17 35	5.79	6.79	Ko	8	..	37605i
10	1354	54.8	-57 10	7.3	8.3	Ko	4	..	40088b	60	1609	55.1	+16 53	7.7	8.9	K5	2	..	37552i
11	1027	54.8	-58 49	8.9	9.3	Ao	3	..	40088b	61	..	55.1	+ 1 43	..	..	A2	2	..	15244b
12	941	54.8	-61 1	9.3	9.3	Ao	2	..	15516b	62	2154	55.1	+ 0 30	8.7	9.3	Go	2	..	15244b
13	470	54.8	-75 8	9.63	10.0	G5	1	..	22237b	63	2263	55.1	-12 35	7.4	7.4	B9	8	..	20896b
14	1812	54.9	+25 40	5.88	6.88	Ko	8	R	37503i	64	2173	55.1	-15 24	9.2	9.2	Ao	2	..	18976b
15	1835	54.9	+ 9 15	7.9	8.0	A3	5	..	37553i	65	2116	55.1	-18 27	9.6	9.9	F2	2	..	18976b
16	1876	54.9	+ 4 28	9.0	9.1	A2	2	..	15244b	66	6621	55.1	-23 41	8.3	8.6	Ko	5	..	44429b
17	1916	54.9	- 1 31	7.7	8.7	Ko	2	..	38207i	67	6623	55.1	-23 51	10.7	9.6	A5	2	..	44429b
18	2175	54.9	-19 11	7.9	7.7	Ao	5	0,8	11036b	68	4827	55.1	-27 20	10.7	9.2	Ao	2	..	40080b
19	6271	54.9	-25 0	9.35	8.9	B2	2	..	44429b	69	3744	55.1	-42 49	10.2	10.4	K2	1	..	18289b
20	5278	54.9	-29 11	10.4	9.5	Ao	3	..	44428b	70	3796	55.1	-43 34	10.0	9.1	B9	6	..	18289b
21	4160	54.9	-34 40	8.3	8.3	G5	5	..	42909b	71	3913	55.1	-45 3	8.74	8.8	Fo	4	..	18300b
22	4064	54.9	-36 22	8.1	8.7	G5	3	..	42909b	72	3617	55.1	-45 19	9.6	9.6	Ao	2	..	18300b
23	4067	54.9	-36 45	6.99	7.6	G5	4	0,5	8897b	73	3467	55.1	-47 40	9.8	9.4	A2	3	..	18300b
24	3592	54.9	-41 44	9.9	10.1	Ao	3	..	18289b	74	3346	55.1	-48 45	9.1	8.7	Ao	7	..	18300b
25	3741	54.9	-42 44	11.5	9.8	Fo	3	..	18289b	75	1667	55.2	+29 52	8.86	8.86	Ao	2	E	37569i
26	3742	54.9	-43 2	8.8	8.9	Ko	8	..	18289b	76	1849	55.2	+ 6 8	8.7	9.2	F8	2	..	20709b
27	3790	54.9	-43 11	10.2	8.7	B9	7	..	18289b	77	1863	55.2	+ 3 42	8.7	9.1	F5	1	..	37560i
28	3791	54.9	-43 13	10.5	10.2	B9	2	..	18289b	78	1864	55.2	+ 3 32	7.9	8.0	A5	7	..	37560i
29	3614	54.9	-45 50	10.0	9.4	Ao	5	..	18300b	79	2402	55.2	- 7 5	8.7	8.8	A2	5	..	15262b
30	1487	54.9	-53 46	10.6	10.6	A	1	..	24598b	80	2302	55.2	- 7 21	9.1	9.7	Go	2	..	44419b
31	784	54.9	-64 27	9.2	9.5	F	2	..	15274b	81	2301	55.2	- 8 3	9.2	9.3	A2	2	..	15262b
32	397	55.0	+73 51	9.2	9.3	A3	3	..	37559i	82	2299	55.2	- 8 7	9.1	9.2	A3	2	..	15262b
33	533	55.0	+66 48	8.6	8.7	A2	4	..	37713i	83	2337	55.2	-13 34	8.5	8.5	Ao	5	..	18976b
34	1190	55.0	+54 25	7.46	7.60	A5	7	..	38188i	84	2176	55.2	-19 29	8.9	9.2	A3	4	..	18976b
35	1976	55.0	+20 5	6.28	7.28	Ko	8	5,8	37552i	85	2205	55.2	-21 41	8.9	8.9	A5	4	..	44381b
36	1816	55.0	+18 31	7.13	7.91	G5	6	..	37605i	86	3747	55.2	-42 55	9.8	9.5	Ko	4	..	18289b
37	1816	55.0	+12 55	6.68	7.68	Ko	4	..	37553i	87	3621	55.2	-45 24	10.2	9.9	Ao	1	..	18300b
38	1694	55.0	+10 12	8.3	8.8	F8	4	..	37553i	88	1701	55.3	+44 17	7.85	8.13	Fo	5	..	37704i
39	1853	55.0	+ 5 1	8.61	9.79	K5	1	..	20709b	89	2155	55.3	+ 0 13	7.7	8.7	Ko	5	0,2-	15244b
40	2170	55.0	- 8 50	7.8	7.9	A3	8	..	15262b	90	2264	55.3	-13 5	8.7	8.8	A3	2	..	20896b
41	5308	55.0	-26 49	9.2	8.4	A2	5	..	40080b	91	2208	55.3	-21 37	9.1	9.2	B9	2	..	44381b
42	5280	55.0	-29 18	9.7	9.8	G5	1	..	44428b	92	5234	55.3	-28 28	10.2	9.2	A2	3	0,3	40080b
43	5364	55.0	-30 4	9.25	8.9	B9	3	..	42909b	93	5289	55.3	-29 4	8.0	8.7	F8	5	..	40080b
44	5326	55.0	-31 34	9.5	8.9	Ao	1	..	42909b	94	5369	55.3	-30 33	8.1	8.9	G5	3	..	42909b
45	3743	55.0	-42 17	10.2	10.1	G5	2	..	18289b	95	5368	55.3	-30 48	8.3	8.3	Ao	5	..	42909b
46	3616	55.0	-45 30	9.2	9.4	Ko	3	..	18300b	96	4373	55.3	-33 9	9.3	8.7	A2	1	..	42909b
47	3069	55.0	-50 33	10.0	10.0	Ao	2	..	24598b	97	4173	55.3	-35 2	8.25	8.6	Ao	7	..	42909b
48	1490	55.0	-53 12	10.1	10.4	Fo	1	..	24598b	98	3229	55.3	-49 13	9.6	9.2	F2	5	..	18300b
49	1489	55.0	-53 41	10.1	10.1	Ac	2	..	24598b	99	3071	55.3	-50 6	10.2	9.8	Ao	2	..	24598b
50	1028	55.0	-58 51	6.03	8.0	K5	7	..	40088b	100	1597	55.4	+48 53	7.58	8.76	K5	4	E	37704i

65800

7<sup>h</sup> 55<sup>m</sup>.4

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1731	55.4	+35 41	6.27	7.27	Ko	7	..	37569i	51	2782	55.6	-51 38	10.9	10.1	A	1	..	24598b
2	1900	55.4	+19 53	8.55	8.97	F5	2	..	37605i	52	1358	55.6	-57 12	7.2	7.0	Ao	2	..	42171b
3	1611	55.4	+16 27	8.1	8.1	B8	5	..	37605i	53	842	55.6	-65 33	9.9	9.9	A	1	..	15274b
4	1817	55.4	+12 57	6.63	6.61	B9	8	..	37553i	54	1193	55.7	+54 27	8.8	9.8	Ko	1	..	38188i
5	1743	55.4	+12 43	8.3	9.3	Ko	1	..	37552i	55	1668	55.7	+28 55	8.2	8.2	Ao	4	3,4	37569i
6	1941	55.4	+ 8 12	8.3	9.1	G5	4	..	20710b	56	1816	55.7	+25 22	6.20	6.20	Ao	9	..	37503i
7	1866	55.4	+ 3 45	8.3	8.6	F2	3	..	37560i	57	1733	55.7	+17 14	7.7	8.3	Go	3	..	37605i
8	1847	55.4	+ 2 15	9.0	9.3	F2	1	..	37560i	58	1878	55.7	+ 4 24	9.4	10.6	K5	1	..	15244b
9	2329	55.4	-10 8	9.16	10.23	K2	1	..	15262b	59	1969	55.7	+ 0 54	8.84	9.84	Ko	1	..	37560i
10	2118	55.4	-18 7	4.64	4.70	A2	..	2,10	56,85	60	1878	55.7	- 0 27	9.0	9.6	Go	1	..	15244b
11	2324	55.4	-20 10	8.48	9.6	K5	2	0,1	46182b	61	2169	55.7	- 4 50	8.3	9.3	Ko	2	..	44419b
12	5320	55.4	-26 56	8.0	8.9	G5	3	..	40080b	62	2328	55.7	-21 3	8.1	9.2	Ma	3	0,2	44429b
13	5236	55.4	-28 10	8.0	8.0	Fo	7	2,7	44428b	63	2110	55.7	-23 5	7.7	7.6	Ao	6	0,8	11036b
14	3702	55.4	-40 4	9.10	8.9	B5	3	..	18289b	64	4836	55.7	-27 50	7.7	9.2	Ko	4	..	40080b
15	3601	55.4	-41 51	9.9	9.2	Ao	4	..	18289b	65	5249	55.7	-28 28	11.4	10.1	Oc	1	..	44428b
16	3914	55.4	-44 14	9.6	9.6	B9	5	..	18300b	66	3634	55.7	-46 9	9.8	9.6	Go	1	..	18300b
17	3472	55.4	-47 7	8.2	7.9	B9	10	..	18300b	67	2784	55.7	-51 11	6.38	7.3	Fo	8	..	8952b
18	3349	55.4	-48 58	4.50	4.28	Bip	..	R	28,201	68	1452	55.7	-54 4	10.4	10.4	A	2	..	24598b
19	3074	55.4	-50 27	9.6	10.1	Ko	2	..	24598b	69	953	55.7	-60 30	7.6	7.8	B9	7	..	15516b
20	2780	55.4	-52 2	7.5	7.4	F8	2	..	8952b	70	129	55.7	-85 11	8.7	8.8	A2	5	..	15145b
21	974	55.5	+62 6	9.2	9.5	F	1	..	37676i	71	518	55.8	+68 42	7.65	8.07	F5	6	..	37713i
22	1666	55.5	+32 26	8.0	8.0	Ao	7	..	37569i	72	1211	55.8	+53 2	7.7	8.9	K5	3	..	38188i
23	1826	55.5	+24 12	7.41	8.41	Ko	3	..	37605i	73	1612	55.8	+16 43	5.91	5.91	Ao	8	..	37494i
24	1819	55.5	+18 40	8.5	8.8	Fo	3	..	37605i	74	1945	55.8	+ 8 40	7.40	7.96	Go	4	..	37553i
25	2157	55.5	+ 0 13	9.0	9.1	A5	4	3,1-	15244b	75	2379	55.8	- 2 36	6.43	6.26	B3p	7	0,7 R	38370i
26	2166	55.5	- 4 36	7.08	7.58	F8	7	..	12774b	76	2170	55.8	- 4 15	7.9	9.1	K5	2	..	12774b
27	2324	55.5	-10 4	8.81	9.31	F8	3	..	15262b	77	2173	55.8	- 4 29	7.7	7.7	Ao	6	..	12774b
28	2210	55.5	-22 0	8.0	8.0	Ao	4	1,4	11036b	78	2174	55.8	- 4 41	8.9	8.9	Ao	5	..	12774b
29	6288	55.5	-24 19	10.4	9.0	Ao	2	..	44429b	79	2172	55.8	- 4 48	8.5	8.8	Fo	5	..	12774b
30	4831	55.5	-28 0	10.9	9.5	F8	2	..	40080b	80	2404	55.8	- 6 49	8.1	9.1	Ko	3	..	15262b
31	4120	55.5	-37 47	7.09	7.6	Fo	5	..	8897b	81	2269	55.8	-12 13	8.5	9.5	Ko	3	..	20896b
32	3628	55.5	-45 33	10.5	9.4	Ao	3	..	18300b	82	2274	55.8	-17 43	7.9	9.1	K5	1	3,3	11036b
33	3351	55.5	-48 29	10.9	10.1	Go	2	..	18300b	83	2185	55.8	-19 28	9.1	8.7	A2	4	..	18976b
34	1345	55.5	-52 20	10.3	10.4	A2	2	..	24598b	84	2329	55.8	-20 35	9.2	9.8	F8	1	..	44429b
35	949	55.5	-60 37	8.9	9.6	Ao	1	..	15516b	85	2213	55.8	-21 37	9.6	9.2	B9	3	..	44429b
36	237	55.5	-81 20	6.93	6.5	A2	6	0,8	11010b	86	5396	55.8	-25 48	10.0	9.2	B	1	..	44429b
37	667	55.6	+64 22	8.9	9.9	K	1	..	37713i	87	5385	55.8	-30 8	7.60	8.6	Ko	3	..	42909b
38	1855	55.6	+ 5 18	8.7	8.7	Ao	3	..	37553i	88	4076	55.8	-37 2	7.5	7.3	B8	6	1,6	8897b
39	2168	55.6	- 4 19	7.9	9.0	K2	3	..	12774b	89	3715	55.8	-40 11	8.30	9.2	G5	4	..	18289b
40	2327	55.6	- 5 11	8.75	8.83	A3	2	..	12774b	90	3714	55.8	-40 38	10.8	10.1	A2	2	..	18289b
41	2308	55.6	- 7 46	8.5	8.5	Ao	5	..	15262b	91	3606	55.8	-41 19	9.3	9.2	G5	2	..	8897b
42	2175	55.6	- 8 49	8.6	9.2	Go	3	..	15262b	92	3611	55.8	-41 36	9.3	9.5	Ko	3	..	18289b
43	2176	55.6	- 9 6	9.1	10.3	K5	1	..	44419b	93	3806	55.8	-43 22	8.6	8.1	Go	8	..	18289b
44	2196	55.6	-11 18	9.1	9.1	Ao	3	..	20896b	94	3633	55.8	-45 37	10.9	9.9	Ao	1	..	18300b
45	2338	55.6	-13 34	9.0	10.1	K2	1	..	20896b	95	3479	55.8	-47 52	8.5	8.4	B9	7	..	18300b
46	2237	55.6	-16 41	7.09	8.09	Ko	7	..	18976b	96	955	55.8	-60 22	8.7	8.7	Ao	3	..	15516b
47	5328	55.6	-27 1	8.0	9.2	K5	3	..	40080b	97	843	55.8	-65 21	9.2	9.3	A2	5	..	15274b
48	3858	55.6	-39 9	7.4	8.0	Ao	6	..	8897b	98	1212	55.9	+53 29	8.8	9.8	Ko	2	..	38188i
49	3708	55.6	-40 38	8.7	9.2	G5	4	..	18289b	99	1731	55.9	+36 11	8.0	9.0	Ko	3	..	37448i
50	3917	55.6	-44 30	10.5	9.9	F5	1	..	18300b	100	1857	55.9	+ 5 9	5.66	5.66	Ao	..	0,10	56,85

## THE HENRY DRAPER CATALOGUE.

65900

7<sup>h</sup> 55<sup>m</sup>.9

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1849	55.9	+ 2 3	9.0	9.6	Go	1	..	3756oi	51	853	56.1	-63 26	8.4	9.0	Go	6	..	15516b
2	2341	55.9	-13 38	9.1	9.2	A2	3	..	20896b	52	1732	56.2	+36 27	9.4	10.0	G	1	..	37448i
3	2240	55.9	-16 45	7.39	8.39	Ko	5	..	18976b	53	1882	56.2	- 1 7	4.88	5.88	Ko	..	2,8	56,85
4	3920	55.9	-44 57	6.62	5.8	B5	..	0,5-	56,124	54	2175	56.2	- 4 21	8.6	9.0	F5	3	..	12774b
5	3480	55.9	-47 25	7.4	7.0	B8	4	..	8952b	55	2182	56.2	- 8 37	9.1	9.1	Ao	2	..	15262b
6	3078	55.9	-50 29	10.9	9.8	Ao	2	..	18300b	56	2243	56.2	-16 7	9.8	9.8	A	1	..	18976b
7	944	55.9	-60 2	5.66	6.6	F8	..	0,9	56,124	57	5407	56.2	-25 7	8.90	8.9	F5	3	..	44429b
8	925	55.9	-63 2	6.09	6.2	B8	..	1,7	28,201	58	5413	56.2	-26 1	8.7	9.8	K5	1	..	44429b
9	697	55.9	-68 41	8.6	9.7	K2	2	..	15274b	59	5267	56.2	-28 44	10.2	9.2	Go	3	..	40080b
10	481	55.9	-76 21	9.0	9.3	F2	5	..	22237b	60	5354	56.2	-31 30	9.5	8.9	F8	1	..	12788b
11	256	55.9	-79 54	9.14	9.1	Go	2	..	20869b	61	5355	56.2	-31 38	8.9	8.9	F5	1	..	42909b
12	520	56.0	+67 12	9.2	9.7	F8	2	..	37713i	62	4091	56.2	-35 13	8.15	7.7	B8	7	..	42909b
13	1599	56.0	+48 37	8.5	8.9	F5	3	E	37704i	63	4085	56.2	-36 39	9.5	9.0	B9	3	..	42909b
14	1349	56.0	+46 30	7.6	8.0	F5	5	..	37704i	64	3867	56.2	-39 11	9.9	9.5	Ao	3	E	18289b
15	1348	56.0	+45 53	8.16	9.16	Ko	4	..	37704i	65	3723	56.2	-40 13	8.90	9.5	Ko	3	..	18289b
16	1808	56.0	+14 19	8.8	9.6	G5	3	..	37552i	66	3722	56.2	-40 29	8.0	8.1	A2	4	0,2	8897b
17	1870	56.0	+ 3 27	9.0	9.0	Ao	2	..	15244b	67	2789	56.2	-51 33	10.0	9.8	Ao	4	..	24598b
18	2158	56.0	- 0 1	8.98	10.05	K2	1	..	15244b	68	1403	56.2	-55 34	8.2	8.6	A5	6	..	24598b
19	2276	56.0	-17 39	7.9	9.0	K2	3	2,6	11036b	69	850	56.2	-67 30	9.0	9.5	F8	5	..	15274b
20	2186	56.0	-19 47	8.6	8.3	A2	7	..	18976b	70	1982	56.3	+20 1	7.50	7.48	B9	7	..	37605i
21	2215	56.0	-21 37	9.8	9.5	Ao	2	..	44429b	71	1701	56.3	+ 9 54	8.07	8.85	G5	3	..	37553i
22	4840	56.0	-27 30	10.4	9.2	B9	2	..	40080b	72	2171	56.3	- 3 14	7.9	8.9	Ko	2	..	38207i
23	5390	56.0	-30 6	7.59	8.3	Go	5	..	42909b	73	2343	56.3	-13 30	8.7	8.7	Ao	5	..	20896b
24	5350	56.0	-31 43	8.0	8.6	F5	2	..	12788b	74	2323	56.3	-14 44	9.2	9.8	Go	1	..	18976b
25	3908	56.0	-39 1	5.20	6.0	Fo	..	2,10	28,201	75	2114	56.3	-22 35	9.2	8.7	A2	5	..	44429b
26	3616	56.0	-41 40	7.9	8.9	Ko	6	0,2	18289b	76	2115	56.3	-22 51	10.1	9.5	A2	2	..	44429b
27	3924	56.0	-44 14	10.5	9.6	Ao	2	..	18300b	77	5399	56.3	-30 24	9.7	9.5	Ao	2	..	40080b
28	3641	56.0	-46 16	10.0	9.6	Fo	2	..	18300b	78	5401	56.3	-30 30	9.7	9.2	Ao	2	..	40080b
29	3643	56.0	-46 52	7.3	8.2	G5	9	..	18300b	79	5403	56.3	-30 42	9.3	8.6	B8	3	..	40080b
30	3361	56.0	-48 6	6.92	6.7	B3	..	0,5	28,201	80	5402	56.3	-30 56	8.0	8.4	A2	5	..	40080b
31	960	56.0	-60 47	8.8	8.8	Ao	4	..	15516b	81	3868	56.3	-39 42	8.6	9.8	K2	2	..	18289b
32	852	56.0	-63 42	9.6	9.6	Ao	3	..	15516b	82	3764	56.3	-43 2	9.1	8.7	G5	7	..	18289b
33	1527	56.1	+28 28	8.6	8.6	Ao	2	..	38218i	83	3812	56.3	-43 31	9.6	8.7	B9	8	..	18289b
34	1524	56.1	+26 55	8.2	9.2	Ko	4	..	37503i	84	3646	56.3	-46 5	9.6	9.6	F2	3	..	18300b
35	1820	56.1	+13 3	9.0	10.1	K2	1	..	37552i	85	3365	56.3	-48 44	10.5	9.8	Ao	3	..	18300b
36	1897	56.1	+ 7 11	9.0	9.0	Ao	4	..	20710b	86	3366	56.3	-49 3	8.9	8.4	B9	10	..	18300b
37	2329	56.1	- 5 57	9.2	9.2	Ao	2	..	44419b	87	976	56.3	-60 20	8.2	7.7	B8	6	..	15516b
38	2407	56.1	- 6 8	6.55	7.33	G5	8	..	12774b	88	610	56.4	+65 10	8.9	9.9	K	1	..	37713i
39	2310	56.1	- 7 22	8.3	9.1	G5	5	..	15262b	89	1698	56.4	+48 54	8.1	8.4	F2	5	..	37704i
40	2275	56.1	-12 34	var.	var.	Md	..	R	56,200	90	1733	56.4	+36 22	8.8	9.6	G5	1	..	37448i
41	2242	56.1	-16 17	8.9	8.9	Ao	2	..	18976b	91	1667	56.4	+32 27	8.5	9.5	Ko	2	..	37448i
42	5412	56.1	-25 49	10.0	9.2	A5	1	..	44429b	92	1879	56.4	+ 4 24	9.0	10.0	Ko	1	..	15244b
43	5342	56.1	-26 14	9.7	9.2	A2	3	..	44429b	93	2312	56.4	- 7 24	9.2	10.0	G5	1	..	15262b
44	5341	56.1	-26 19	7.9	8.9	Ko	4	..	44429b	94	2345	56.4	-13 51	7.21	7.29	A3	8	..	18976b
45	5319	56.1	-29 14	7.7	8.6	G5	6	..	40080b	95	2344	56.4	-14 4	9.1	9.1	Ao	2	..	20896b
46	3909	56.1	-38 54	8.3	8.9	Ao	4	..	13054b	96	2190	56.4	-15 28	7.35	7.49	A5	8	..	18976b
47	3237	56.1	-49 58	10.0	9.8	F8	3	..	24598b	97	2191	56.4	-19 56	8.9	9.6	Ko	2	..	46182b
48	1453	56.1	-54 18	7.3	8.6	Ko	8	..	24598b	98	5273	56.4	-28 28	9.5	9.0	Ao	4	..	40080b
49	966	56.1	-60 20	8.4	8.1	B8	4	..	15516b	99	5332	56.4	-29 23	10.4	9.8	Ao	2	..	40080b
50	967	56.1	-60 39	7.4	6.7	B9	5	..	8913b	100	3765	56.4	-43 1	9.6	9.8	Ko	1	..	18289b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

66000

7<sup>h</sup> 56<sup>m</sup>.4

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	3815	56.4	-43 20	10.0	10.2	Ao	2	..	18289b	51	2280	56.7	-12 30	8.3	8.3	Ao	6	..	20896b
2	3931	56.4	-44 12	9.8	9.3	A2	5	..	18300b	52	2279	56.7	-12 57	8.7	9.0	F2	3	..	20896b
3	3648	56.4	-46 51	9.6	9.1	Ao	6	..	18300b	53	2346	56.7	-13 51	9.1	9.2	A2	2	..	20896b
4	3484	56.4	-48 1	9.8	8.8	Ao	5	..	18300b	54	2336	56.7	-20 11	9.6	9.5	Ao	2	..	46182b
5	3243	56.4	-49 42	6.43	6.26	B3	..	R	28,201	55	2118	56.7	-22 9	9.6	9.6	Ao	2	..	44429b
6	3244	56.4	-49 42	6.65	6.48	B3	..	..	..	56	2120	56.7	-22 12	9.4	9.2	Ao	4	..	44429b
7	1350	56.4	-52 5	9.5	9.8	Fo	3	..	24598b	57	6661	56.7	-23 28	10.7	9.2	B9	2	..	44429b
8	788	56.4	-64 27	8.8	9.8	Ko	1	..	15274b	58	5359	56.7	-26 57	9.5	8.9	Go	4	..	40080b
9	776	56.4	-66 20	9.8	9.9	A2	1	..	15274b	59	4411	56.7	-33 51	7.29	8.0	Ao	8	..	42909b
10	801	56.4	-69 23	8.3	9.1	G5	5	..	15274b	60	3652	56.7	-46 38	9.8	9.9	Ko	2	..	18300b
11	1843	56.5	+ 9 11	6.11	6.53	F5	8	..	37553i	61	3490	56.7	-48 0	7.9	8.1	Go	5	..	18300b
12	1859	56.5	+ 5 29	8.1	8.1	Ao	3	..	37553i	62	3374	56.7	-48 5	8.8	8.6	F8	5	..	18300b
13	1971	56.5	+ 1 45	8.5	8.5	Ao	2	2,2	12774b	63	2795	56.7	-51 53	8.9	8.4	A2	5	..	24598b
14	2176	56.5	- 4 29	8.7	9.0	F2	2	..	12774b	64	1456	56.7	-54 16	7.6	8.7	Ko	8	..	24598b
15	2192	56.5	-19 12	8.5	8.6	F5	6	..	18976b	65	948	56.7	-59 41	8.5	8.5	Ao	4	..	15516b
16	2193	56.5	-20 4	9.4	9.2	Ao	2	..	46182b	66	988	56.7	-60 35	7.4	6.7	B8	5	..	8913b
17	5354	56.5	-26 34	9.3	8.9	Fo	3	..	44429b	67	1242	56.8	+55 2	7.46	7.46	Ao	5	2,5	37409i
18	5410	56.5	-30 17	10.4	9.5	Ao	1	..	40080b	68	1195	56.8	+53 57	7.05	7.39	F2	7	R	38188i
19	4094	56.5	-35 43	7.13	7.2	A2	5	0,9	8897b	69	1195	56.8	+53 57	7.05	7.39	A2	7	R	38188i
20	3869	56.5	-39 44	9.5	10.7	K5	1	..	18289b	70	1856	56.8	+ 6 26	9.0	9.0	Ao	3	..	20710b
21	3818	56.5	-43 9	8.5	7.8	Ao	3	..	42977b	71	2185	56.8	- 9 0	9.1	9.5	F5	2	..	15262b
22	3369	56.5	-48 51	8.9	8.6	B9	9	..	18300b	72	2332	56.8	- 9 37	8.5	8.9	F5	3	..	15262b
23	3248	56.5	-49 25	11.5	10.1	F5	2	..	18300b	73	5361	56.8	-26 25	10.0	8.9	Ao	3	..	44429b
24	3247	56.5	-49 39	9.4	9.2	F2	4	..	18300b	74	5340	56.8	-29 11	9.5	8.9	Fo	4	..	40080b
25	3085	56.5	-50 11	9.6	9.2	Fo	4	..	18300b	75	5417	56.8	-30 48	8.1	9.2	K5	2	..	40080b
26	3084	56.5	-50 21	10.5	10.0	A2	1	..	18300b	76	5375	56.8	-31 29	8.9	8.7	A2	2	..	12788b
27	2791	56.5	-51 11	7.3	7.2	B9	6	..	8952b	77	3731	56.8	-40 20	8.3	8.9	K2	5	..	18289b
28	1454	56.5	-54 46	9.1	10.4	K5	2	..	24598b	78	3653	56.8	-45 53	8.4	8.5	Go	7	..	18300b
29	946	56.5	-59 10	9.3	9.3	Ao	3	..	40088b	79	3655	56.8	-47 2	7.3	7.4	B9	6	0,3	8952b
30	936	56.5	-61 48	8.7	9.0	F5	2	..	15516b	80	1355	56.8	-52 16	7.7	8.4	Ko	2	..	8952b
31	855	56.5	-64 3	9.5	9.5	Ao	3	..	15274b	81	930	56.8	-62 57	9.6	9.6	Ao	2	..	15516b
32	2162	56.6	+ 0 15	8.2	9.2	Ko	1	..	15244b	82	478	56.8	-74 52	9.4	9.4	Ao	3	..	22237b
33	2200	56.6	-11 57	8.9	8.9	Ao	4	..	20896b	83	1243	56.9	+55 47	7.8	8.6	G5	3	E	37676i
34	2127	56.6	-18 51	8.7	8.7	Ao	6	..	18976b	84	1706	56.9	+44 30	8.0	9.0	Ko	2	..	37704i
35	5421	56.6	-25 26	9.7	9.0	B9	2	..	44429b	85	1819	56.9	+37 26	7.12	8.30	K5	7	..	37448i
36	5336	56.6	-29 12	10.2	9.5	Ao	4	..	40080b	86	1826	56.9	+25 17	8.6	9.8	K5	3	..	37503i
37	4406	56.6	-34 0	7.42	8.6	K2	4	..	42909b	87	1744	56.9	+21 13	9.4	10.4	K	2	..	37605i
38	4093	56.6	-36 28	8.4	8.3	Ao	4	..	42909b	88	1823	56.9	+13 7	9.0	9.8	G5	1	..	37552i
39	3622	56.6	-41 26	7.8	8.4	F8	5	..	8897b	89	1881	56.9	+ 4 51	9.41	10.19	G5	2	..	15244b
40	2793	56.6	-51 53	9.4	9.5	Ko	1	..	24598b	90	1875	56.9	+ 3 16	7.5	8.6	K2	4	0,4	37560i
41	1404	56.6	-55 44	8.8	9.2	A3	3	E	24598b	91	2163	56.9	+ 0 43	9.2	9.3	A5	1	..	15244b
42	947	56.6	-59 25	7.7	8.4	Ko	3	..	15516b	92	2176	56.9	- 3 16	8.3	8.3	Ao	3	..	38207i
43	778	56.6	-66 30	8.6	9.8	K5	1	..	15274b	93	2318	56.9	- 7 24	8.9	8.9	Ao	7	..	15262b
44	650	56.6	-72 50	8.8	9.9	K2	1	..	22237b	94	2186	56.9	- 8 19	7.21	7.63	F5	7	R	15262b
45	1090	56.7	+58 42	8.6	9.1	F8	2	..	37676i	95	2186	56.9	- 8 19	7.21	7.63	A2	7	R	15262b
46	1818	56.7	+37 39	9.0	9.8	G5	2	..	37448i	96	2337	56.9	-20 46	9.1	9.6	Ao	2	..	44429b
47	1825	56.7	+25 5	8.6	9.6	Ko	2	..	37503i	97	2220	56.9	-22 3	7.5	7.4	A2	8	..	11036b
48	1839	56.7	+22 9	8.0	9.0	Ko	2	..	37605i	98	4857	56.9	-28 1	10.7	9.5	A2	2	..	40080b
49	1949	56.7	+ 8 35	8.5	9.3	G5	2	..	20710b	99	5288	56.9	-28 9	10.2	9.2	B9	3	..	40080b
50	1880	56.7	+ 4 49	7.36	8.36	Ko	3	..	37553i	100	5426	56.9	-30 58	8.3	10.1	Ma	1	..	40080b

## THE HENRY DRAPER CATALOGUE.

66100

7<sup>h</sup> 56<sup>m</sup>.9

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	5377	56.9	-31 16	9.7	8.9	Ao	2	..	12788b	51	4863	57.1	-27 36	9.7	9.2	G5	2	..	4008ob
2	4414	56.9	-33 54	8.9	9.2	K	1	..	42909b	52	5299	57.1	-28 53	7.9	7.7	B5	8	..	4008ob
3	3773	56.9	-42 34	10.9	10.1	A3	2	..	18289b	53	5351	57.1	-29 36	8.7	9.2	Ko	2	..	4008ob
4	3939	56.9	-44 23	9.1	7.8	B8	8	..	18300b	54	5431	57.1	-30 43	11.2	9.8	A2	2	..	4008ob
5	3936	56.9	-44 45	7.10	7.5	B8	2	..	42977b	55	4703	57.1	-32 5	7.9	9.2	K5	1	..	42909b
6	3655	56.9	-45 40	10.9	9.8	A2	3	..	18300b	56	4705	57.1	-32 46	9.3	9.2	Ao	1	..	12788b
7	1356	56.9	-53 0	8.9	9.2	A2	8	..	24598b	57	3881	57.1	-39 46	10.6	10.1	A3	2	..	18289b
8	950	56.9	-59 6	8.8	8.8	B9	4	..	40088b	58	3735	57.1	-40 9	9.9	9.8	Ao	2	..	18289b
9	932	56.9	-62 51	7.82	8.3	Ao	2	..	8913b	59	3632	57.1	-41 23	9.9	9.5	Fo	5	..	18289b
10	846	56.9	-65 38	7.8	9.0	K5	4	..	8913b	60	3633	57.1	-41 38	10.6	9.8	A2	2	..	18289b
11	476	56.9	-73 52	9.3	9.4	A5	2	..	22237b	61	3830	57.1	-43 8	10.9	10.2	F5	1	..	18289b
12	1603	57.0	+48 13	8.0	8.8	G5	3	5,1	37704i	62	3661	57.1	-45 31	7.4	8.1	G5	10	..	18300b
13	1707	57.0	+44 8	7.29	7.57	Fo	6	..	37704i	63	3664	57.1	-46 15	9.6	9.9	Ao	7	..	18300b
14	1777	57.0	+41 1	9.2	9.5	F2	2	..	37463i	64	3498	57.1	-47 50	9.4	9.0	G5	3	..	18300b
15	1616	57.0	+16 10	7.85	8.85	Ko	3	..	37552i	65	3256	57.1	-49 30	10.2	9.5	A5	4	..	18300b
16	1734	57.0	+15 14	7.14	7.28	A5	6	0,6	37552i	66	2796	57.1	-51 28	9.8	9.8	F2	3	..	24598b
17	1748	57.0	+12 44	7.50	8.50	Ko	3	..	37553i	67	1005	57.1	-60 22	8.1	8.1	Ao	3	..	15516b
18	1749	57.0	+12 31	7.7	8.8	K2	2	..	20709b	68	633	57.1	-71 43	7.9	8.3	F5	7	..	24527b
19	1848	57.0	+ 9 52	8.82	9.82	Ko	1	..	20710b	69	229	57.1	-80 56	9.04	10.1	K5	1	E	22237b
20	1858	57.0	+ 6 53	8.4	9.2	G5	2	..	37553i	70	278	57.2	+77 55	7.94	8.28	F2	5	..	38187i
21	1926	57.0	- 2 0	8.32	9.50	K5	2	..	24493b	71	395	57.2	+72 13	8.0	8.6	Go	4	..	38187i
22	2383	57.0	- 2 42	8.1	8.2	A2	3	..	38207i	72	611	57.2	+65 51	8.9	9.0	A2	3	..	37713i
23	2319	57.0	- 7 56	8.4	9.2	G5	3	..	15262b	73	1384	57.2	+51 13	8.4	8.8	F5	2	..	38188i
24	2283	57.0	-12 27	8.9	10.3	Ma	1	..	20896b	74	1801	57.2	+42 43	9.0	9.5	F8	2	..	37704i
25	2332	57.0	-14 29	8.1	9.3	K5	2	..	18976b	75	1735	57.2	+36 38	6.80	8.15	Mb	4	0,4	37448i
26	2331	57.0	-14 58	7.51	8.51	Ko	6	..	18976b	76	1707	57.2	+26 33	6.96	7.02	A2	7	..	37503i
27	5378	57.0	-31 20	10.2	9.2	Ao	2	..	42909b	77	1882	57.2	+ 4 26	8.3	9.1	G5	4	..	20709b
28	4421	57.0	-33 35	8.3	8.9	G5	2	..	42909b	78	2336	57.2	- 5 38	9.6	9.6	Ao	2	..	15262b
29	3930	57.0	-38 44	9.3	9.2	Ao	2	..	13054b	79	2189	57.2	- 9 5	6.92	7.00	A3	9	..	15262b
30	3880	57.0	-39 48	10.6	10.4	A	1	..	18289b	80	2340	57.2	-21 5	8.7	8.9	B8	5	..	44429b
31	3734	57.0	-40 38	9.7	8.9	B9	5	..	18289b	81	6329	57.2	-24 41	8.0	7.4	B5	4	3,8	11036b
32	3629	57.0	-41 21	10.8	9.5	A2	3	..	18289b	82	5372	57.2	-26 20	9.7	9.2	Ao	2	..	44429b
33	3630	57.0	-41 58	9.3	8.7	A	5	R	8897b	83	5353	57.2	-29 17	8.9	8.6	B9	6	..	4008ob
34	3631	57.0	-42 0	8.1	8.0	A	5	R	8897b	84	5433	57.2	-30 47	9.7	8.9	Ao	4	..	4008ob
35	3940	57.0	-44 38	10.5	9.9	A3	1	..	18300b	85	4102	57.2	-36 30	8.6	8.3	Ao	5	..	42909b
36	951	57.0	-59 11	8.6	9.1	G5	3	..	4008ob	86	4101	57.2	-36 59	9.3	9.2	B9	3	..	42909b
37	1003	57.0	-60 26	8.9	7.6	B9	5	..	15516b	87	3883	57.2	-39 55	7.36	7.8	Ao	7	2,3	8897b
38	1093	57.1	+58 4	6.85	7.27	F5	6	..	37676i	88	3780	57.2	-42 38	9.6	8.9	B9	3	..	39914b
39	1529	57.1	+28 13	8.2	8.6	F5	4	E	37503i	89	3947	57.2	-44 39	10.5	9.4	B9	3	..	18300b
40	1835	57.1	+24 52	8.81	9.09	Fo	3	..	37503i	90	3662	57.2	-45 11	6.55	7.8	Ko	7	..	39914b
41	1854	57.1	+ 2 36	4.52	5.52	Ko	..	0, R	56,85	91	3499	57.2	-47 30	10.5	9.3	Ao	3	..	18300b
42	1886	57.1	- 0 41	9.0	9.0	Ao	3	0,3	15244b	92	3381	57.2	-48 38	8.2	7.4	Ao	4	..	8952b
43	2384	57.1	- 2 30	8.7	8.8	A3	3	..	24493b	93	1357	57.2	-52 50	9.2	9.2	Ao	7	..	24598b
44	2320	57.1	- 7 8	8.9	9.7	G5	1	..	15262b	94	1006	57.2	-60 33	5.88	5.71	B3	..	0,9	28,201
45	2342	57.1	-10 30	8.9	10.0	K2	1	..	44419b	95	702	57.2	-70 27	8.5	8.5	Ao	6	..	15274b
46	2130	57.1	-18 22	7.7	8.8	K2	5	..	18976b	96	1709	57.3	+44 20	9.2	9.3	A5	2	..	37704i
47	2338	57.1	-20 43	10.1	9.8	A2	1	..	44429b	97	2048	57.3	+38 54	8.2	8.2	Ao	3	..	37448i
48	6667	57.1	-23 34	8.7	8.6	F5	6	..	44429b	98	1738	57.3	+11 5	9.0	9.1	A2	3	E	37552i
49	5436	57.1	-25 8	7.23	8.1	A3	4	0,7-	11036b	99	1876	57.3	+ 3 22	7.8	8.8	Ko	2	0,2	37560i
50	5370	57.1	-26 47	8.3	8.4	B8	5	..	4008ob	100	1977	57.3	+ 1 42	9.0	9.4	F5	2	..	15244b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

66200

7h 57m.3

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	2321	m. 57.3	° 7 18	9.0	10.2	K5	1	..	15262b	51	3745	m. 57.5	° 40 18	8.1	8.3	Go	7	..	18289b
2	2201	57.3	-15 19	7.9	8.9	Ko	2	..	18976b	52	3786	57.5	-42 47	8.2	7.3	B8	7	..	39914b
3	2121	57.3	-22 57	9.1	9.2	G5	2	..	44429b	53	3835	57.5	-43 32	9.0	7.5	B9	5	..	39914b
4	4868	57.3	-27 27	9.2	9.2	K2	2	..	40080b	54	3952	57.5	-44 16	9.1	10.3	K5	1	..	18300b
5	5362	57.3	-29 14	10.2	9.2	Ao	3	..	40080b	55	3388	57.5	-48 36	6.16	6.2	Aop	..	1,7 R	28,201
6	5387	57.3	-31 13	8.5	8.6	Ao	3	..	12788b	56	3262	57.5	-49 47	8.2	9.3	K2	6	..	18300b
7	3939	57.3	-38 27	7.7	8.7	K2	4	..	13054b	57	3095	57.5	-50 21	9.6	8.7	B9	6	..	18300b
8	3781	57.3	-42 8	9.4	8.9	G5	1	..	39914b	58	1359	57.5	-52 19	9.7	10.1	F5	1	..	24598b
9	3949	57.3	-44 59	10.5	9.6	Fo	2	..	18300b	59	1012	57.5	-60 19	8.56	8.1	Ao	4	..	15516b
10	3384	57.3	-48 42	6.12	6.0	A2	..	0,7	28,201	60	941	57.5	-61 18	7.2	7.8	Fo	4	0,8	8913b
11	1505	57.4	+50 32	8.0	9.0	Ko	2	..	38188i	61	793	57.5	-64 44	8.3	9.3	Ko	4	..	15274b
12	1529	57.4	+45 17	8.0	8.3	F2	2	..	37704i	62	1119	57.6	+57 30	9.5	9.6	A2	1	..	37409i
13	1528	57.4	+44 54	8.47	9.47	Ko	3	..	37704i	63	1522	57.6	+47 35	7.7	8.1	F5	5	..	37704i
14	1741	57.4	+35 41	8.6	9.8	K5	2	..	37448i	64	1802	57.6	+42 20	8.0	9.0	Ko	1	..	37704i
15	1675	57.4	+29 2	8.8	9.8	Ko	2	..	38218i	65	1825	57.6	+13 20	10.4	10.4	Ao	1	..	37552i
16	1532	57.4	+28 4	5.04	6.04	Ko	10	R	37503i	66	1856	57.6	+2 15	9.0	9.8	G5	1	..	15244b
17	1824	57.4	+13 14	8.3	9.3	Ko	3	..	37553i	67	1979	57.6	+1 17	8.5	8.6	A3	5	1,2-	15244b
18	1708	57.4	+10 9	8.7	8.7	Ao	6	..	20710b	68	1928	57.6	-2 7	7.57	7.99	F5	5	..	38207i
19	1850	57.4	+9 22	8.4	9.4	Ko	4	..	20710b	69	2388	57.6	-2 59	8.1	9.1	Ko	2	..	38207i
20	1851	57.4	+9 11	9.0	9.5	F8	2	..	20710b	70	2340	57.6	-5 32	9.0	9.5	F8	3	..	15262b
21	2288	57.4	-12 31	8.06	8.84	G5	6	..	20896b	71	2135	57.6	-18 23	9.2	9.8	Go	1	..	18976b
22	2134	57.4	-18 13	9.0	9.5	F8	2	..	18976b	72	2200	57.6	-19 23	9.2	9.5	G	1	..	18976b
23	2343	57.4	-20 53	7.89	9.2	K5	5	..	44429b	73	2345	57.6	-20 35	8.4	8.7	B9	6	..	44429b
24	2223	57.4	-21 21	9.1	9.5	F5	1	..	44429b	74	2226	57.6	-21 29	9.4	9.8	G5	1	..	44429b
25	6676	57.4	-23 43	9.7	9.5	F8	3	..	44429b	75	6337	57.6	-24 20	10.2	9.8	A	1	..	44429b
26	6331	57.4	-24 27	10.2	9.7	F8	1	..	44429b	76	6340	57.6	-24 53	9.3	9.3	K2	2	..	44429b
27	5382	57.4	-26 39	10.2	9.2	Ao	3	..	40080b	77	5453	57.6	-30 19	7.55	8.9	K2	2	..	40080b
28	4871	57.4	-27 24	8.9	8.9	Ko	4	..	40080b	78	5454	57.6	-30 20	8.0	8.6	Ko	6	..	40080b
29	4872	57.4	-27 50	10.2	9.2	Fo	4	..	40080b	79	4109	57.6	-35 38	7.60	8.6	K5	3	..	42909b
30	4213	57.4	-34 23	8.3	7.7	B5	7	..	42909b	80	3891	57.6	-39 56	9.50	9.5	G5	3	..	18289b
31	3741	57.4	-40 15	7.9	8.9	Ko	8	..	18289b	81	3643	57.6	-41 31	10.1	10.4	K5	1	..	18289b
32	3739	57.4	-40 25	10.6	9.5	B9	3	..	18289b	82	3641	57.6	-41 33	10.1	10.1	K2	2	..	18289b
33	3639	57.4	-42 2	8.3	8.4	F5	3	..	8897b	83	3668	57.6	-45 32	9.4	9.1	Ao	5	..	18300b
34	3950	57.4	-44 23	9.4	9.0	F2	5	..	18300b	84	3098	57.6	-50 25	8.6	8.4	B8	7	..	18300b
35	3951	57.4	-45 4	7.44	7.2	B9	1	0,10	42977b	85	442	57.7	+71 33	7.8	8.6	G5	3	..	38187i
36	3386	57.4	-48 50	9.6	9.2	B8	5	..	18300b	86	1136	57.7	+59 33	6.59	6.59	Ao	9	..	37676i
37	2798	57.4	-51 51	9.8	10.4	G5	1	..	24598b	87	1986	57.7	+20 38	7.09	7.87	G5	7	..	37605i
38	854	57.4	-67 24	9.1	9.5	F5	3	..	15274b	88	1980	57.7	+1 28	8.7	9.7	Ko	2	0,1	15244b
39	267	57.5	+79 31	8.6	8.7	A2	3	..	37493i	89	1929	57.7	-1 34	9.0	9.3	Fo	2	..	24493b
40	1842	57.5	+22 50	9.0	9.8	G5	2	..	37503i	90	2204	57.7	-19 11	9.2	10.1	K5	1	..	18976b
41	2180	57.5	-4 2	8.5	8.8	F2	3	..	12774b	91	5316	57.7	-28 7	8.7	9.2	K5	2	..	40080b
42	2339	57.5	-6 3	6.30	6.86	Go	9	..	12774b	92	5367	57.7	-29 30	9.7	9.8	Fo	1	..	40080b
43	2419	57.5	-6 25	8.5	8.6	A2	6	..	15262b	93	4112	57.7	-35 6	7.65	7.7	B9	4	1,9	8897b
44	2207	57.5	-12 1	8.5	8.6	A3	4	..	20896b	94	3263	57.7	-49 29	9.6	10.4	K5	2	..	18300b
45	2289	57.5	-12 44	10.7	12.1	Mc	..	R	M	95	1015	57.7	-60 32	8.1	8.1	Ao	3	..	15516b
46	2292	57.5	-17 19	8.7	8.7	B9	4	..	18976b	96	794	57.7	-64 16	8.6	8.6	Ao	5	..	15274b
47	2344	57.5	-20 13	8.63	8.6	Ao	5	..	18976b	97	1094	57.8	+58 27	8.7	8.8	A2	4	..	37409i
48	2224	57.5	-21 8	9.4	9.5	Ao	2	..	44429b	98	1608	57.8	+48 11	8.1	9.2	K2	2	3,1	37704i
49	4873	57.5	-27 23	9.2	8.3	Ao	1	..	43040b	99	1636	57.8	+33 19	6.61	6.61	Ao	6	0,9	37448i
50	5308	57.5	-28 28	10.2	9.3	Ao	2	..	40080b	100	1744	57.8	+17 9	7.52	8.52	Ko	5	..	37605i



## THE HENRY DRAPER CATALOGUE.

66300

7<sup>h</sup> 57<sup>m</sup>.8

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1811	57.8	+13 58	7.6	8.2	Go	3	..	37552i	51	2341	58.0	- 6 3	6.78	7.78	Ko	5	..	12774b
2	1740	57.8	+11 38	8.1	8.5	F5	2	..	37553i	52	2341	58.0	- 9 10	8.9	9.0	A2	3	..	15262b
3	1710	57.8	+10 14	7.7	8.8	K2	2	..	37553i	53	2341	58.0	-14 59	8.96	8.96	Ao	3	..	18976b
4	2421	57.8	- 6 38	9.1	10.1	Ko	2	..	15262b	54	6350	58.0	-24 56	10.2	9.3	Ao	2	..	44429b
5	5458	57.8	-26 4	10.0	9.2	B9	2	..	44429b	55	5404	58.0	-26 6	9.7	8.9	Ao	4	..	44429b
6	5395	57.8	-26 56	6.52	6.9	B9	5	..	43040b	56	5381	58.0	-29 31	9.7	9.2	F2	2	..	40080b
7	4220	57.8	-34 18	9.9	9.0	A	2	..	42909b	57	4228	58.0	-34 12	9.7	8.7	Ao	4	..	42909b
8	4225	57.8	-34 25	7.9	7.6	F5	7	..	42909b	58	4116	58.0	-37 0	5.85	6.5	A2	..	0.6-	56,124
9	4114	57.8	-35 31	7.9	7.6	Ao	3	1,6	8897b	59	3756	58.0	-40 28	9.9	9.8	F2	2	..	18289b
10	3900	57.8	-39 27	9.7	9.8	Fo	3	..	18289b	60	3655	58.0	-41 45	9.7	9.5	Fo	1	..	39914b
11	3648	57.8	-41 29	8.6	8.4	B9p	2	R	42977b	61	3678	58.0	-46 13	10.5	9.3	Ao	4	..	18300b
12	3840	57.8	-43 59	9.8	9.4	A2	4	..	18300b	62	3680	58.0	-46 13	9.8	8.7	Ao	3	1,7	8952b
13	3675	57.8	-46 38	10.5	9.9	Fo	2	..	18300b	63	3679	58.0	-46 33	9.1	9.4	Ko	3	..	18300b
14	3102	57.8	-50 4	10.0	10.0	F5	1	..	18300b	64	3396	58.0	-48 7	9.6	8.7	B9	7	..	18300b
15	3103	57.8	-50 24	10.0	9.2	Ao	3	..	18300b	65	3104	58.0	-50 13	9.20	9.0	B8	7	..	18300b
16	2803	57.8	-51 14	10.0	9.8	B9	3	..	24598b	66	1363	58.0	-52 5	9.1	9.2	B8	6	..	24598b
17	1362	57.8	-52 47	10.4	10.4	A	1	R	24598b	67	1487	58.0	-56 39	8.7	9.8	K2	1	..	40088b
18	1017	57.8	-60 31	9.1	9.1	A	1	..	15516b	68	13	58.1	+88 56	7.01	7.01	Ao	6	..	37546i
19	1989	57.9	+40 2	7.17	8.17	Ko	6	0,5	37463i	69	1744	58.1	+35 8	8.4	8.7	F2	4	..	37448i
20	1831	57.9	+18 1	7.7	8.7	Ko	4	..	37605i	70	1735	58.1	+33 57	8.5	9.3	G5	2	..	38611i
21	1813	57.9	+14 23	7.4	8.4	Ko	5	..	37552i	71	1840	58.1	+24 47	8.16	9.51	Ma	2	..	37503i
22	1857	57.9	+ 2 13	8.7	9.7	Ko	3	0,1-	15244b	72	1739	58.1	+15 23	9.0	9.1	A2	2	E	37605i
23	2209	57.9	-12 5	8.5	8.8	Fo	5	..	20896b	73	1711	58.1	+10 25	8.7	8.7	Ao	3	..	37553i
24	2339	57.9	-15 3	9.8	9.8	A	1	..	18976b	74	1931	58.1	- 1 51	9.0	9.0	Ao	2	..	24493b
25	2255	57.9	-16 37	9.0	9.5	F8	2	..	18976b	75	2295	58.1	-17 23	8.7	8.7	Ao	4	..	18976b
26	2346	57.9	-20 22	9.2	9.2	Fo	2	..	44429b	76	2205	58.1	-20 2	7.48	7.8	Ao	8	..	18976b
27	2347	57.9	-20 26	9.2	9.2	Fo	2	..	44429b	77	5466	58.1	-25 47	7.9	8.0	Ao	3	1,7	43040b
28	5457	57.9	-25 5	9.40	9.8	Ko	1	..	44429b	78	5468	58.1	-25 57	9.0	10.0	Ma	..	..	M
29	5399	57.9	-26 58	8.7	8.0	A3	7	..	40080b	79	5402	58.1	-26 11	8.9	9.2	K5	2	..	44429b
30	5321	57.9	-28 6	10.4	9.2	B9	3	..	40080b	80	5331	58.1	-29 0	10.2	9.3	A2	2	..	40080b
31	5325	57.9	-28 31	10.4	9.5	Ao	1	..	40080b	81	5470	58.1	-30 51	7.7	8.0	A2	8	..	40080b
32	5377	57.9	-29 20	9.7	8.9	A2	5	..	40080b	82	4736	58.1	-32 53	7.9	9.2	K5	1	..	12788b
33	4115	57.9	-36 23	8.7	8.3	Ao	5	..	42909b	83	4738	58.1	-33 2	8.3	8.3	B9	4	..	12788b
34	4114	57.9	-36 55	8.6	8.3	B	3	..	13054b	84	4122	58.1	-35 54	7.4	8.3	Fo	3	0,5	8897b
35	3753	57.9	-40 36	10.1	9.8	A5	2	..	18289b	85	3397	58.1	-48 37	11.5	10.1	A2	2	..	18300b
36	3650	57.9	-41 17	10.6	10.5	B9	1	..	18289b	86	3269	58.1	-49 54	9.8	9.2	F8	4	..	18300b
37	3673	57.9	-45 53	10.2	10.3	G5	1	..	18300b	87	3105	58.1	-50 56	9.8	9.8	Fo	3	..	24598b
38	3506	57.9	-47 32	8.6	7.9	Ao	2	..	8952b	88	955	58.1	-59 41	9.0	9.0	Ao	3	..	40088b
39	1465	57.9	-54 56	7.12	8.3	Ko	8	..	24598b	89	520	58.2	+68 3	9.4	10.2	G5	2	..	37713i
40	1031	57.9	-58 56	8.5	9.9	G5	2	..	40088b	90	1805	58.2	+42 7	8.8	9.3	F8	1	..	37704i
41	954	57.9	-59 56	6.41	6.0	B8	..	0,8	28,201	91	1682	58.2	+29 25	9.0	9.1	A2	3	..	38218i
42	1018	57.9	-60 19	5.06	7.4	Ma	..	5,6	28,201	92	1846	58.2	+21 59	7.65	8.65	Ko	4	..	37605i
43	783	57.9	-66 30	8.7	8.7	Ao	2	..	8913b	93	2328	58.2	- 7 10	8.7	8.7	Ao	7	..	15262b
44	313	58.0	+76 56	8.0	9.0	Ko	3	..	38187i	94	2257	58.2	-16 25	8.3	8.9	Go	2	..	18976b
45	1766	58.0	+43 4	8.9	9.3	F5	2	..	37463i	95	2234	58.2	-21 33	9.8	9.5	Ao	1	..	44429b
46	1877	58.0	+23 41	8.6	9.7	K2	2	..	37503i	96	2233	58.2	-21 55	9.0	8.7	B5	5	..	44429b
47	1845	58.0	+22 21	6.85	7.85	Ko	7	..	37605i	97	5465	58.2	-25 12	10.7	9.7	A2	1	..	44429b
48	1754	58.0	+12 28	6.67	7.17	F8	6	..	37553i	98	5469	58.2	-25 41	9.7	9.0	Ao	2	..	44429b
49	1904	58.0	+ 7 25	8.1	8.7	Go	3	..	20710b	99	5385	58.2	-29 46	9.2	9.8	F8	1	..	40080b
50	2394	58.0	- 2 27	8.3	8.3	Ao	3	..	38207i	100	5409	58.2	-31 9	9.3	8.9	Fo	3	..	40080b



## ANNALS OF HARVARD COLLEGE OBSERVATORY.

66400

7<sup>h</sup> 58<sup>m</sup>.2

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	4448	58.2 <sup>m.</sup>	-33 51	8.6	9.2	K5	3	..	42909b	51	2353	58.5 <sup>°</sup>	-20 11	8.58	8.7	A2	4	..	18976b
2	4235	58.2	-34 52	8.6	9.2	K2	2	..	42909b	52	2128	58.5	-22 24	9.2	9.5	Ko	1	..	44429b
3	4233	58.2	-35 1	8.60	8.1	B5	6	..	42909b	53	5420	58.5	-26 51	10.2	9.8	Ko	1	..	40080b
4	4162	58.2	-37 51	8.9	8.9	Ao	3	..	13054b	54	4894	58.5	-27 16	6.85	7.7	G5	2	..	43040b
5	3760	58.2	-40 32	9.9	9.5	Fo	3	..	18289b	55	5341	58.5	-28 51	10.2	9.2	A2	2	..	40080b
6	3511	58.2	-47 12	8.4	7.9	B9	8	..	18300b	56	5418	58.5	-32 2	7.9	8.3	B9	3	..	12788b
7	3271	58.2	-49 36	9.2	8.7	F2	7	..	18300b	57	3914	58.5	-39 53	9.9	9.8	Ao	3	..	18289b
8	2805	58.2	-51 24	8.9	9.2	A2	7	..	24598b	58	3767	58.5	-40 30	10.6	10.1	Go	1	..	18289b
9	1022	58.2	-60 28	8.5	7.8	B9	3	..	15516b	59	3667	58.5	-41 4	9.3	10.1	K2	2	..	18289b
10	640	58.2	-71 43	8.2	9.4	K5	2	..	24527b	60	3669	58.5	-41 59	10.6	10.1	B9	2	..	18289b
11	1748	58.3	+16 55	8.3	8.4	A5	3	..	37605i	61	3848	58.5	-43 15	10.5	9.4	B9	2	..	39914b
12	2351	58.3	-20 24	8.9	9.2	F8	3	..	44429b	62	3688	58.5	-47 1	8.8	8.4	Ao	7	..	18300b
13	2350	58.3	-20 33	8.9	8.7	B9	3	..	44429b	63	3403	58.5	-48 38	9.0	8.0	B9	8	..	18300b
14	2235	58.3	-21 59	8.0	8.0	A2	7	..	11036b	64	3273	58.5	-49 20	7.4	7.0	B3	..	0,4	28,201
15	4888	58.3	-27 23	11.2	9.3	Ao	2	..	40080b	65	3274	58.5	-49 32	9.4	10.1	K5	1	..	18300b
16	4889	58.3	-28 0	9.3	8.9	B8	3	..	40080b	66	1415	58.5	-55 27	8.9	10.4	K5	1	..	24598b
17	5336	58.3	-28 35	10.4	9.2	Ao	1	..	40080b	67	858	58.5	-67 24	8.8	8.9	A2	3	..	8913b
18	5338	58.3	-28 49	10.0	9.2	Ao	2	..	40080b	68	1768	58.6	+43 38	8.9	9.2	F	2	..	37704i
19	5335	58.3	-28 54	9.0	8.9	G5	4	..	40080b	69	1806	58.6	+41 57	7.8	8.2	F5	4	..	37704i
20	3963	58.3	-38 12	8.4	8.6	A2	5	..	13054b	70	1780	58.6	+41 28	7.64	7.72	A3	4	..	37704i
21	3794	58.3	-42 20	10.0	10.1	Ko	1	..	18289b	71	1993	58.6	+20 5	8.4	8.7	Fo	4	..	37605i
22	3679	58.3	-45 29	9.2	8.8	Ao	4	..	18300b	72	1958	58.6	+ 8 33	8.3	8.4	A5	4	..	37553i
23	3513	58.3	-47 4	8.4	8.4	A2	7	..	18300b	73	1888	58.6	+ 4 19	8.7	8.7	B9	2	E	38271i
24	484	58.3	-76 14	9.0	10.4	Ma	1	..	22237b	74	2212	58.6	-11 21	9.2	9.2	A	2	..	20896b
25	347	58.4	+74 21	8.8	9.4	Go	3	..	38187i	75	2298	58.6	-17 39	9.2	9.3	A2	2	..	18976b
26	1992	58.4	+20 23	9.0	9.4	F5	3	..	37605i	76	5422	58.6	-26 16	9.3	9.7	Ko	2	..	44434b
27	1859	58.4	+ 2 3	8.3	9.1	G5	4	0,2	15244b	77	4895	58.6	-27 16	10.7	8.9	B8	4	..	40080b
28	1891	58.4	- 0 51	8.1	8.9	G5	2	..	38207i	78	3969	58.6	-44 19	6.8	7.6	Ko	9	..	18300b
29	2345	58.4	- 5 33	9.2	9.2	Ao	3	..	15262b	79	3685	58.6	-45 34	8.4	8.4	Fo	5	..	18300b
30	2344	58.4	- 5 45	8.7	9.9	K5	2	..	15262b	80	3691	58.6	-46 58	9.1	9.1	Fo	5	..	18300b
31	2352	58.4	-21 7	9.6	9.8	B9	1	..	44429b	81	1034	58.6	-58 35	8.5	9.0	Ao	3	..	40088b
32	6362	58.4	-24 30	9.7	9.3	G5	1	..	44429b	82	853	58.6	-65 10	9.23	9.5	F8	3	..	15274b
33	6365	58.4	-24 45	7.35	8.0	F2	3	2,7	11036b	83	852	58.6	-65 53	8.8	9.8	Ko	2	..	15274b
34	5482	58.4	-30 8	8.45	8.9	Ko	4	..	40080b	84	1541	58.7	+27 53	8.8	9.8	Ko	2	E	37503i
35	4120	58.4	-36 46	6.30	8.0	Ma	4	0,6	8897b	85	1843	58.7	+24 39	8.06	8.84	G5	3	..	37503i
36	3763	58.4	-40 13	9.65	9.8	F8	2	..	18289b	86	1862	58.7	+ 2 42	8.4	9.6	K5	1	..	38271i
37	3662	58.4	-41 29	9.9	9.8	F5	3	..	18289b	87	2399	58.7	- 2 51	9.0	9.0	Ao	4	..	24493b
38	3962	58.4	-44 57	7.74	7.8	B9	1	0,9	42997b	88	2329	58.7	- 7 53	7.35	7.85	F8	8	..	21394b
39	3680	58.4	-45 17	9.6	9.8	Ko	2	..	18300b	89	2300	58.7	-12 36	9.1	9.9	G5	2	..	20896b
40	3681	58.4	-45 20	9.6	9.6	Ko	2	..	18300b	90	2301	58.7	-12 43	9.2	9.2	Ao	2	..	20896b
41	1505	58.4	-53 52	5.89	5.84	B8	..	1,6	56,124	91	2302	58.7	-12 55	8.5	9.5	Ko	4	..	20896b
42	1023	58.4	-60 30	9.0	8.2	Ao	2	..	15516b	92	2222	58.7	-16 1	8.9	8.9	B9	4	..	18976b
43	1753	58.5	+21 19	7.32	7.38	A2	9	..	37605i	93	2263	58.7	-16 23	8.1	8.4	Fo	5	..	18976b
44	1817	58.5	+13 58	7.4	8.4	Ko	..	5,6	56,85	94	2209	58.7	-19 55	9.6	9.2	B9	2	..	44429b
45	1957	58.5	+ 8 22	9.4	9.8	F5	2	..	20710b	95	2358	58.7	-20 50	9.4	9.2	Ao	2	..	44429b
46	1864	58.5	+ 6 37	7.9	7.9	B8	5	..	37553i	96	6372	58.7	-24 53	10.2	9.2	A2	3	..	44429b
47	2191	58.5	- 3 11	8.5	9.0	F8	4	..	24493b	97	5350	58.7	-28 58	9.2	8.6	Fo	5	..	40080b
48	2344	58.5	- 9 36	8.5	8.6	A2	6	2,3	15262b	98	5426	58.7	-31 37	9.2	8.9	Ko	2	..	40080b
49	2359	58.5	-13 20	9.4	10.8	Mb	..	..	M	99	5425	58.7	-31 52	10.7	9.2	Ao	2	..	42909b
50	2360	58.5	-13 21	8.9	9.0	A2	7	..	20896b	100	4125	58.7	-36 33	7.9	7.8	B9	4	0,7	8897b

THE HENRY DRAPER CATALOGUE.

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7<sup>h</sup> 58<sup>m</sup>.7

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	3673	58.7	-41 37	8.9	8.9	B9	5	..	39914b	51	1994	59.0	+20 32	8.7	8.8	A2	4	..	37605i
2	3674	58.7	-41 41	8.6	8.6	B9	5	..	39914b	52	1911	59.0	+19 7	6.06	6.06	A0	7	..	37494i
3	3801	58.7	-42 30	8.6	7.7	B9	4	0,5	8897b	53	1742	59.0	+15 41	8.7	9.5	G5	2	..	37605i
4	3971	58.7	-44 55	10.5	10.2	K2	1	..	18300b	54	2218	59.0	-12 1	9.6	10.1	F8	1	..	20896b
5	3695	58.7	-46 34	9.8	9.3	B9	3	..	18300b	55	6379	59.0	-24 19	7.9	8.6	G5	2	0,6	11036b
6	3277	58.7	-49 35	10.5	9.5	F5	3	..	18300b	56	6378	59.0	-24 38	8.7	9.2	K0	2	..	44429b
7	2808	58.7	-51 9	7.1	7.6	B9	3	..	8952b	57	5438	59.0	-26 11	10.9	9.5	A0	1	..	44434b
8	1197	58.8	+54 49	8.41	8.47	A2	2	..	38188i	58	4907	59.0	-27 10	10.2	9.2	Go	1	..	40080b
9	1759	58.8	+12 35	7.9	8.7	G5	3	..	37553i	59	4134	59.0	-35 58	8.6	9.2	Go	2	..	42909b
10	1743	58.8	+11 9	7.7	7.8	A5	5	..	37553i	60	3926	59.0	-39 21	9.9	10.1	A0	1	..	18289b
11	1891	58.8	+4 35	8.3	9.4	K2	1	..	38271i	61	3923	59.0	-39 36	9.3	9.8	K0	2	..	18289b
12	1890	58.8	+4 19	8.7	9.2	F8	3	..	38271i	62	3771	59.0	-40 52	9.9	9.8	F5	2	..	18289b
13	1883	58.8	+3 41	7.7	7.7	B9	5	..	38271i	63	3804	59.0	-42 14	10.5	9.2	F0	1	..	39914b
14	2348	58.8	-6 1	9.1	10.2	K2	1	..	21394b	64	3805	59.0	-42 59	10.9	9.8	A0	2	..	18289b
15	2199	58.8	-8 59	9.1	9.1	A0	2	..	44419b	65	3859	59.0	-43 23	9.6	9.6	K2	1	..	39914b
16	2356	58.8	-10 48	8.5	8.6	A2	3	..	20896b	66	3691	59.0	-45 15	8.5	7.6	A0	7	..	18300b
17	2147	58.8	-18 18	8.3	8.4	A2	7	..	18976b	67	3282	59.0	-49 42	9.4	9.5	K0	4	..	18300b
18	2238	58.8	-21 37	10.1	9.5	Go	1	..	46182b	68	1364	59.0	-52 25	10.0	10.1	A2	2	..	24598b
19	5430	58.8	-27 1	10.7	9.2	B8	2	..	40080b	69	956	59.0	-59 23	7.7	8.4	F0	5	..	15516b
20	4244	58.8	-34 43	10.1	9.2	B8	3	..	42909b	70	1028	59.1	+60 59	8.8	9.1	F	2	..	37676i
21	3973	58.8	-38 53	8.6	9.2	K0	4	..	18289b	71	1266	59.1	+56 51	9.2	9.3	A2	2	..	37409i
22	3111	58.8	-50 19	7.39	7.4	B3	4	..	8952b	72	1672	59.1	+32 16	8.6	8.7	A3	3	..	37448i
23	1371	58.8	-57 10	7.6	8.9	K2	4	..	40088b	73	1860	59.1	+9 34	7.37	7.93	Go	5	..	37553i
24	865	58.8	-63 12	9.8	9.8	A	1	..	15516b	74	1893	59.1	+4 52	8.71	8.77	A2	3	..	38271i
25	314	58.9	+77 35	9.2	10.2	K0	1	..	38187i	75	2195	59.1	-3 38	9.1	10.1	K0	1	E	24493b
26	496	58.9	+70 31	8.0	8.0	A0	5	..	37713i	76	2214	59.1	-19 53	9.2	9.2	B8	2	..	44429b
27	1711	58.9	+26 3	9.1	10.1	K0	1	..	37503i	77	6730	59.1	-23 26	9.7	9.8	K5	1	..	44429b
28	1819	58.9	+14 4	8.1	8.4	F0	4	..	37552i	78	5441	59.1	-26 59	8.1	8.9	G5	4	..	40080b
29	1828	58.9	+13 43	8.3	9.3	K0	2	..	37552i	79	5359	59.1	-28 48	10.0	9.3	F5	2	..	40080b
30	1716	58.9	+10 32	7.5	8.3	G5	3	..	37553i	80	5416	59.1	-29 9	10.2	9.2	B5	3	..	40080b
31	1959	58.9	+7 58	9.0	9.0	A0	2	..	20710b	81	5438	59.1	-32 0	8.1	8.7	A0	3	..	12788b
32	1894	58.9	-0 46	9.4	9.7	F2	3	..	24493b	82	4763	59.1	-32 52	7.4	7.8	B3	..	0,7	56,124
33	2330	58.9	-8 5	9.1	9.1	A0	3	..	21394b	83	4248	59.1	-34 16	7.52	8.6	Ma	4	..	42909b
34	2357	58.9	-10 42	9.0	9.0	A0	3	..	20896b	84	3679	59.1	-41 55	10.3	9.8	B8	2	..	18289b
35	2217	58.9	-11 47	9.1	9.1	A0	2	..	20896b	85	3810	59.1	-43 4	9.1	9.8	K5	1	..	39914b
36	2348	58.9	-15 4	8.96	10.14	K5	1	..	20896b	86	3975	59.1	-44 29	9.1	8.7	B9	6	..	18300b
37	2239	58.9	-21 43	8.9	9.5	K0	1	..	44429b	87	3977	59.1	-44 52	9.0	9.0	K0	3	..	18300b
38	2132	58.9	-23 2	9.2	9.2	F0	3	..	44429b	88	3701	59.1	-46 45	9.8	9.1	A0	3	..	18300b
39	5500	58.9	-30 56	7.7	8.0	B3	8	..	40080b	89	3286	59.1	-49 24	10.9	10.0	G5	2	..	18300b
40	4128	58.9	-36 7	6.64	7.3	F0	6	..	8897b	90	1365	59.1	-52 9	8.3	9.2	G5	6	..	24598b
41	3922	58.9	-39 14	10.3	9.5	A0	2	..	18289b	91	866	59.1	-63 17	4.96	4.79	B3	..	R	28,201
42	3770	58.9	-40 57	9.3	9.2	B9	4	..	18289b	92	1939	59.2	-1 34	8.3	8.3	B9	5	..	38207i
43	2803	58.9	-42 35	10.9	10.1	F8	1	..	18289b	93	2406	59.2	-3 6	9.1	9.5	F5	3	..	24493b
44	3973	58.9	-44 6	9.2	9.4	K0	3	..	18289b	94	2197	59.2	-4 32	7.38	7.26	B5	7	..	12774b
45	1507	58.9	-53 11	9.1	10.1	K0	4	..	24598b	95	2241	59.2	-21 38	10.1	9.5	F5	1	R	44429b
46	1470	58.9	-54 14	5.99	6.2	B5	..	4,5	56,124	96	5443	59.2	-26 32	10.0	9.2	A2	3	..	40080b
47	1494	58.9	-56 24	8.9	8.9	A0	3	..	40088b	97	4913	59.2	-27 41	10.9	9.5	A0	3	..	40080b
48	123	58.9	-87 25	9.0	9.4	F5	2	..	13459b	98	4766	59.2	-32 11	5.80	7.8	K2	..	2,8	56,124
49	1544	59.0	+28 38	9.0	10.2	K5	..	..	M	99	4253	59.2	-34 16	9.3	9.5	A0	4	..	42909b
50	1845	59.0	+23 54	7.9	8.7	G5	2	..	37605i	100	4138	59.2	-35 56	7.9	8.7	G5	4	..	42909b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

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7<sup>h</sup> 59<sup>m</sup>.2

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	3927	59.2	-39 50	8.6	9.2	Fo	5	..	18289b	51	3684	59.4	-41 11	11.0	10.1	Ao	1	..	18289b
2	3678	59.2	-41 25	11.3	10.1	B9	1	..	18289b	52	3699	59.4	-45 16	9.1	8.8	Ao	5	..	18300b
3	3682	59.2	-42 3	10.3	9.5	Go	2	..	18289b	53	3697	59.4	-46 4	7.7	7.8	Go	8	..	18300b
4	3812	59.2	-42 42	10.0	9.8	Ko	1	..	18289b	54	3708	59.4	-46 13	9.1	8.7	A5	6	..	18300b
5	3980	59.2	-44 23	6.58	6.8	Aop	..	1,4 R	56,124	55	1373	59.4	-57 50	7.7	8.0	Ao	7	..	40088b
6	1509	59.2	-53 45	9.8	10.1	Fo	2	..	24598b	56	1033	59.4	-60 39	8.3	8.4	Ao	6	..	15516b
7	1419	59.2	-55 10	6.30	5.8	B8	5	..	42171b	57	947	59.4	-61 15	7.7	7.7	Ao	2	1,5	8913b
8	1498	59.2	-56 40	8.2	8.3	B9	5	..	40088b	58	801	59.4	-64 34	8.4	8.7	Fo	5	..	15274b
9	670	59.3	+64 37	9.0	9.3	F	2	..	37713i	59	705	59.4	-68 52	8.8	10.0	K5	1	..	15274b
10	1200	59.3	+54 24	8.0	8.0	Ao	5	..	38188i	60	1247	59.5	+55 37	7.30	8.30	Ko	5	0,4	38188i
11	1726	59.3	+31 36	8.1	9.1	Ko	1	E	37448i	61	1808	59.5	+42 16	7.9	8.3	F5	4	..	37704i
12	1861	59.3	+9 47	8.27	9.05	G5	5	..	20710b	62	1713	59.5	+26 24	8.2	9.2	Ko	3	..	37503i
13	1983	59.3	+1 15	7.7	8.7	Ko	6	2,3-	15244b	63	1847	59.5	+24 29	8.6	9.4	G5	2	..	37503i
14	2230	59.3	-15 35	8.5	9.5	Ko	2	..	18976b	64	1831	59.5	+13 24	5.11	5.11	Ao	..	1,8	56,85
15	2304	59.3	-17 17	8.9	9.2	F2	3	..	18976b	65	1867	59.5	+6 29	8.1	7.9	B3	6	..	37553i
16	2305	59.3	-17 46	9.2	9.2	Ao	3	..	18976b	66	2198	59.5	-3 42	9.1	10.1	Ko	2	E	24493b
17	2359	59.3	-20 29	8.3	8.7	F5	4	..	44429b	67	2221	59.5	-11 26	9.8	9.8	Ao	1	..	20896b
18	2243	59.3	-21 56	9.6	9.5	Go	1	..	46182b	68	2222	59.5	-11 34	9.1	10.1	Ko	1	..	20896b
19	5445	59.3	-26 23	10.0	9.3	Ao	2	..	40080b	69	2233	59.5	-15 23	8.35	8.35	Ao	6	..	18976b
20	4914	59.3	-27 16	11.4	9.5	F5	1	..	40080b	70	2135	59.5	-22 24	8.6	8.3	Ao	2	2,7	11036b
21	5362	59.3	-28 10	10.7	9.2	Fo	2	..	40080b	71	5503	59.5	-25 38	9.5	9.2	A2	3	..	44429b
22	5427	59.3	-29 40	10.9	9.8	Ao	1	..	40080b	72	5501	59.5	-25 44	8.7	9.3	K5	2	..	44429b
23	4259	59.3	-34 48	7.9	8.6	Go	5	..	42909b	73	5372	59.5	-28 5	8.3	8.4	A2	7	..	40080b
24	3776	59.3	-41 2	5.55	5.53	B9	..	0,7-	56,124	74	5433	59.5	-29 58	10.0	9.5	Ao	2	..	40080b
25	3683	59.3	-41 11	10.6	9.8	Ao	2	..	18289b	75	3931	59.5	-39 26	10.1	10.1	A	1	..	18289b
26	3417	59.3	-48 18	10.5	10.1	Ao	2	..	18300b	76	3777	59.5	-40 7	7.10	8.4	Ko	3	0,8	8897b
27	3414	59.3	-48 42	10.5	10.1	F2	2	..	18300b	77	3687	59.5	-41 58	9.9	9.5	Ao	1	..	39914b
28	3290	59.3	-49 4	9.4	9.5	F5	4	..	18300b	78	3819	59.5	-42 44	9.8	9.8	Ko	2	..	18289b
29	3115	59.3	-50 15	8.6	8.6	B8	6	..	24598b	79	3815	59.5	-43 0	10.0	9.5	G5	1	..	39914b
30	946	59.3	-61 18	8.9	8.8	Ao	2	..	15516b	80	3865	59.5	-43 23	10.2	10.2	K2	2	..	18289b
31	478	59.3	-73 12	8.6	9.4	G5	2	..	22237b	81	1278	59.6	+52 17	8.9	9.3	F5	2	..	38188i
32	134	59.3	-85 27	9.2	9.6	F5	3	..	22238b	82	1740	59.6	+36 35	6.97	7.31	F2	7	..	37448i
33	348	59.4	+74 39	8.2	8.5	Fo	5	..	38187i	83	1677	59.6	+32 43	8.1	8.4	Fo	4	..	37448i
34	1822	59.4	+37 10	9.0	9.3	F2	2	..	37448i	84	1536	59.6	+27 49	6.16	6.14	B9	9	0,10	38218i
35	1741	59.4	+34 52	9.07	9.35	Fo	3	..	37448i	85	1744	59.6	+15 3	8.69	8.69	Ao	3	..	37552i
36	1998	59.4	+20 48	9.0	9.1	A3	5	..	37605i	86	1721	59.6	+10 47	7.7	8.5	G5	4	..	37553i
37	1762	59.4	+12 29	8.5	9.5	Ko	2	0,2	37553i	87	2176	59.6	+0 10	9.0	9.1	A2	3	0,2-	15244b
38	1910	59.4	+7 37	8.1	9.3	K5	2	..	20710b	88	2201	59.6	-4 59	8.20	9.20	Ko	5	..	21394b
39	1864	59.4	+2 20	10.4	10.5	A2	1	..	38271i	89	2335	59.6	-8 2	8.6	8.9	Fo	5	..	21394b
40	1940	59.4	-1 18	7.7	7.7	Ao	4	..	38207i	90	2351	59.6	-10 2	8.31	8.73	F5	3	..	20896b
41	2407	59.4	-2 18	8.5	9.5	Ko	3	..	24493b	91	2154	59.6	-19 5	8.7	8.9	Ao	4	..	18976b
42	2196	59.4	-3 16	8.7	8.8	A2	4	..	24493b	92	2362	59.6	-20 37	9.6	8.7	Ao	3	..	44429b
43	2362	59.4	-10 9	8.06	9.06	Ko	3	..	20896b	93	2361	59.6	-20 42	9.6	9.5	A	1	..	44429b
44	2232	59.4	-16 3	8.0	9.0	Ko	3	..	18976b	94	6741	59.6	-23 36	8.7	8.6	F5	5	..	44429b
45	2151	59.4	-18 59	9.1	9.1	Ao	2	..	18976b	95	5453	59.6	-26 46	10.4	9.2	B	2	..	40080b
46	6394	59.4	-24 9	9.5	9.2	Ao	2	..	44429b	96	5455	59.6	-26 54	8.9	9.2	B8	3	..	40080b
47	5368	59.4	-28 32	10.4	9.2	Ao	2	..	40080b	97	5456	59.6	-27 2	10.2	9.2	B9	2	..	40080b
48	5525	59.4	-30 27	8.0	8.6	G5	5	..	40080b	98	5439	59.6	-29 8	7.4	8.0	Ao	8	..	40080b
49	4260	59.4	-34 6	9.3	8.6	B9	7	..	42909b	99	5438	59.6	-29 20	10.2	9.5	F5	1	..	40080b
50	3929	59.4	-39 57	7.75	7.7	Ao	4	0,5	8897b	100	5452	59.6	-31 24	8.0	8.3	B8	6	..	40080b

## THE HENRY DRAPER CATALOGUE.

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7<sup>h</sup> 59<sup>m</sup>.6

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	4268	59.6	-34 36	9.9	9.5	Ao	2	..	42909b	51	497	59.9	+70 0	6.55	7.05	F8	8	..	37713i
2	4189	59.6	-37 17	8.9	9.2	Ao	2	..	13054b	52	455	59.9	+69 44	8.54	9.32	G5	3	..	37713i
3	4188	59.6	-37 54	9.0	8.7	Ao	3	..	13054b	53	1852	59.9	+24 20	8.5	8.9	F5	2	..	37503i
4	3689	59.6	-41 57	10.3	9.8	F5	2	..	18289b	54	1912	59.9	+7 41	8.5	9.3	G5	1	..	20710b
5	3709	59.6	-46 32	8.5	7.6	Ao	3	0.9	8952b	55	2440	59.9	-6 55	8.3	8.9	Go	7	..	21394b
6	1475	59.6	-54 23	7.0	7.5	A5	3	..	42171b	56	2137	59.9	-22 15	9.6	9.5	A5	2	..	44429b
7	948	59.6	-61 5	9.4	9.4	Ao	1	..	15516b	57	6406	59.9	-24 22	9.7	9.2	Ao	2	..	44429b
8	1508	59.7	+50 12	8.0	8.3	F2	2	..	38188i	58	5460	59.9	-26 16	10.0	9.8	Ko	1	..	44434b
9	1749	59.7	+34 57	9.42	9.84	F5	1	..	37448i	59	5541	59.9	-30 13	9.20	8.9	B9	5	..	40080b
10	1757	59.7	+21 5	9.5	9.5	A	2	..	37605i	60	5537	59.9	-30 41	9.7	9.5	F5	1	..	40080b
11	1839	59.7	+17 55	7.7	8.9	K5	3	..	37605i	61	4149	59.9	-37 1	8.7	8.6	Ao	5	..	13054b
12	1747	59.7	+11 33	8.4	8.5	A5	2	2.2	37553i	62	3936	59.9	-39 15	9.3	10.1	Ko	1	..	18289b
13	1896	59.7	+4 26	7.7	7.7	B8	5	R	37553i	63	3830	59.9	-42 43	10.2	10.1	Ko	1	..	18289b
14	1897	59.7	+4 19	7.9	8.7	G5	2	..	38271i	64	3873	59.9	-43 12	9.8	8.4	Ao	4	..	39914b
15	2412	59.7	-2 31	8.7	8.7	Ao	2	..	38207i	65	3537	59.9	-48 2	6.70	6.2	B3	..	0.8-	28,201
16	2199	59.7	-3 33	8.7	8.8	A3	3	..	24493b	66	3118	59.9	-50 20	9.1	8.4	B9	7	..	24598b
17	2337	59.7	-7 42	9.1	9.9	G5	2	..	21394b	67	1366	59.9	-52 11	9.0	9.3	Go	4	..	24598b
18	2336	59.7	-7 50	9.1	9.9	G5	3	..	21394b	68	1425	59.9	-55 15	6.82	6.6	Ao	3	..	42171b
19	2366	59.7	-10 21	8.7	9.8	K2	1	..	20896b	69	1037	59.9	-60 14	8.8	8.7	Ao	3	..	15516b
20	2224	59.7	-11 15	9.2	9.3	A2	2	..	20896b	70	951	59.9	-61 58	9.1	9.1	Ao	2	..	15516b
21	2272	59.7	-16 59	8.7	8.8	A2	3	..	18976b	71	642	59.9	-71 9	8.1	8.5	F5	4	..	24527b
22	2365	59.7	-21 5	7.64	8.0	Ao	4	..	11036b	72	1267	0.0	+56 44	9.2	9.5	Fo	3	5.2	37409i
23	6401	59.7	-24 26	10.4	9.2	A2	1	..	44429b	73	1279	0.0	+52 33	8.8	9.8	K	1	..	38188i
24	5440	59.7	-29 29	9.2	8.9	B9	4	..	40080b	74	1530	0.0	+47 7	8.06	8.12	A2	5	..	37704i
25	3934	59.7	-39 22	9.3	9.2	Ao	5	..	18289b	75	1832	0.0	+13 48	7.5	8.5	Ko	..	0.3	56,85
26	3783	59.7	-40 50	7.3	7.7	Ko	4	0.8	8897b	76	1963	0.0	+8 29	7.8	8.6	G5	3	..	37553i
27	3868	59.7	-43 59	10.5	9.9	F5	2	..	18289b	77	1869	0.0	+5 43	8.6	8.6	Ao	5	..	20710b
28	3986	59.7	-44 50	10.2	10.2	A2	2	..	18300b	78	2202	0.0	-3 13	6.72	6.72	Ao	7	..	38207i
29	1250	59.8	+55 52	9.2	10.2	Ko	1	..	37409i	79	2354	0.0	-5 59	9.9	9.9	Ao	2	..	21394b
30	1218	59.8	+53 52	8.2	9.4	K5	3	..	38188i	80	2208	0.0	-8 12	9.0	9.8	G5	3	..	21394b
31	1898	59.8	+4 20	8.7	8.8	A2	1	..	38271i	81	2226	0.0	-11 44	8.6	9.8	K5	2	..	20896b
32	1866	59.8	+2 45	9.0	10.2	K5	1	..	38271i	82	2274	0.0	-16 33	9.2	9.2	Ao	2	..	18976b
33	2179	59.8	+0 23	9.0	9.0	Ao	3	0.3-	15244b	83	2311	0.0	-17 23	6.60	7.78	K5	4	0.7	11036b
34	1895	59.8	-0 44	9.0	9.1	A5	2	..	38207i	84	2155	0.0	-18 41	8.0	9.1	K2	6	..	18976b
35	2353	59.8	-5 7	7.75	9.10	Ma	6	..	21394b	85	2224	0.0	-19 29	8.7	9.5	K5	2	..	44429b
36	2352	59.8	-5 49	8.9	10.0	K2	1	..	21394b	86	2248	0.0	-21 7	8.2	9.2	K5	3	..	44429b
37	2352	59.8	-9 57	8.66	9.44	G5	1	..	20896b	87	2247	0.0	-21 47	9.5	9.5	A3	3	..	44429b
38	2315	59.8	-12 51	7.5	7.4	B5	7	..	20896b	88	4933	0.0	-27 12	10.3	9.2	B2	3	R	40080b
39	2245	59.8	-21 31	7.4	8.4	F2	2	..	11036b	89	5383	0.0	-28 53	7.27	7.5	A2	9	..	40080b
40	5458	59.8	-26 42	7.5	7.7	F2	3	..	43040b	90	5447	0.0	-29 5	10.5	8.9	Ao	3	..	40080b
41	4148	59.8	-36 51	9.5	9.2	Fo	1	..	13054b	91	5467	0.0	-31 15	9.3	9.2	G5	3	..	40080b
42	3998	59.8	-38 21	7.89	9.2	K5	2	..	13054b	92	5468	0.0	-31 41	9.8	9.2	Ao	1	..	42909b
43	3784	59.8	-40 46	9.7	8.9	Ao	5	..	18289b	93	4273	0.0	-34 18	9.3	9.2	Ao	2	..	42909b
44	3690	59.8	-41 26	10.1	9.5	Ao	4	..	18289b	94	3694	0.0	-41 54	10.6	9.8	F5	2	R	18289b
45	3826	59.8	-43 3	10.0	9.2	Go	1	..	39914b	95	0.0	0.0	-41 54	10.5	10.3	A2	..	..	..
46	3988	59.8	-44 55	9.22	9.9	K5	2	..	18300b	96	3993	0.0	-44 41	10.5	10.3	Ko	1	..	18300b
47	3297	59.8	-49 40	7.4	7.2	Fo	..	2.7	28,201	97	3991	0.0	-45 0	8.64	9.3	Ko	4	..	18300b
48	1477	59.8	-54 31	10.0	10.1	A2	2	..	24598b	98	952	0.0	-61 8	8.7	9.1	A3	2	..	15516b
49	1424	59.8	-55 19	7.47	7.3	Ao	2	..	42171b	99	1110	0.1	+60 9	9.5	10.1	G	1	..	37676i
50	949	59.8	-61 36	8.0	8.8	Ko	3	..	15516b	100	1844	0.1	+25 46	8.9	10.1	K5	2	..	37503i

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

66800

8<sup>h</sup> 0<sup>m</sup>.1

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1869	m. 0.1	° 6 7	7.8	7.8	B9	6	..	37553i	51	1925	m. 0.3	° 19 2	8.8	8.9	A5	3	..	37605i
2	2415	0.1	- 2 24	9.2	9.3	A2	4	..	24493b	52	1821	0.3	+14 44	9.5	9.5	A	2	..	37552i
3	2442	0.1	- 6 57	9.2	10.0	G5	2	..	21394b	53	1867	0.3	+ 2 28	9.1	9.4	F2	1	..	38271i
4	2340	0.1	- 8 2	9.2	9.3	A2	3	..	21394b	54	2209	0.3	- 5 1	9.10	9.10	Ao	3	..	21394b
5	2341	0.1	- 8 6	9.1	9.7	Go	4	..	21394b	55	2370	0.3	-10 9	9.26	9.32	A2	1	..	20896b
6	2355	0.1	-14 37	9.1	9.2	A2	2	..	20896b	56	2359	0.3	-15 6	9.31	9.73	F5	1	..	20857b
7	2240	0.1	-15 41	8.8	8.9	A2	3	..	18976b	57	2369	0.3	-20 59	9.3	9.2	F5	1	..	44429b
8	2225	0.1	-20 6	8.68	9.6	K5	1	..	44429b	58	4941	0.3	-27 29	11.3	9.5	A2	2	..	40080b
9	5463	0.1	-26 24	9.6	9.8	K5	1	..	40080b	59	4942	0.3	-27 54	10.5	9.7	Ao	2	..	40080b
10	4153	0.1	-35 14	8.30	8.1	B9	6	..	42909b	60	5394	0.3	-28 58	10.3	9.5	Ao	2	..	40080b
11	3939	0.1	-39 43	2.27	..	Od	..	R	28,201	61	5479	0.3	-31 7	9.4	8.7	B9	4	..	40080b
12	3832	0.1	-42 40	6.25	7.8	Ko	7	0,3-	8897b	62	4158	0.3	-36 17	8.3	8.6	Ao	3	..	8897b
13	3876	0.1	-43 44	11.5	10.3	Ko	1	..	18289b	63	3122	0.3	-50 16	9.6	8.9	Ao	5	..	24598b
14	3706	0.1	-46 0	8.5	8.1	F8	6	..	18300b	64	2818	0.3	-51 13	9.4	10.5	Ko	1	..	24598b
15	3720	0.1	-46 14	10.5	9.4	Fo	3	..	18300b	65	1369	0.3	-53 2	9.0	9.5	Fo	4	..	24598b
16	3722	0.1	-46 46	9.8	9.3	Ao	5	..	18300b	66	1484	0.3	-54 58	8.8	9.6	Ko	4	E	24598b
17	3540	0.1	-47 38	11.5	10.2	Go	2	..	18300b	67	1429	0.3	-56 1	8.5	9.2	Ko	4	..	24598b
18	3428	0.1	-48 22	8.9	10.1	K2	2	..	18300b	68	1382	0.3	-57 33	9.1	9.6	A5	4	..	40088b
19	1479	0.1	-54 10	9.6	9.6	Ao	3	..	24598b	69	1038	0.3	-60 48	8.6	9.0	Ao	2	..	15516b
20	1482	0.1	-54 45	8.2	9.6	Ko	5	..	24598b	70	1142	0.4	+59 3	9.2	10.0	G5	3	..	37409i
21	1483	0.1	-54 54	9.6	9.6	Ao	3	E	24598b	71	1095	0.4	+58 35	9.0	9.8	G5	1	..	37676i
22	268	0.2	+79 38	8.6	9.6	Ko	2	..	37493i	72	1681	0.4	+32 29	9.1	9.6	F8	1	..	37448i
23	537	0.2	+65 57	7.32	8.50	K5	5	..	37713i	73	1718	0.4	+26 11	8.7	9.3	Go	3	..	37503i
24	1770	0.2	+43 34	6.24	6.24	Ao	9	2, R	37463i	74	1886	0.4	+23 39	9.5	10.3	G5	1	..	37503i
25	1842	0.2	+18 17	9.1	9.2	A2	2	..	37605i	75	1887	0.4	+22 56	6.24	7.59	Mb	8	..	37605i
26	1632	0.2	+16 47	9.3	9.3	Ao	2	..	37552i	76	1822	0.4	+14 33	8.8	9.4	Go	4	..	37552i
27	1723	0.2	+10 10	8.4	8.4	Ao	3	..	37553i	77	1990	0.4	+ 0 57	8.09	8.09	Ao	5	0,5	12774b
28	1964	0.2	+ 8 33	8.6	8.7	A2	3	..	20710b	78	1902	0.4	- 0 39	9.1	9.9	G5	1	..	24493b
29	1989	0.2	+ 1 49	9.1	9.4	F	1	..	38271i	79	1946	0.4	- 1 57	9.8	9.8	Ao	1	..	24493b
30	2208	0.2	- 4 14	8.6	9.1	F8	4	..	21394b	80	1947	0.4	- 2 7	9.8	9.8	Ao	2	..	24493b
31	2212	0.2	- 8 36	7.9	8.0	A2	8	..	21394b	81	2355	0.4	- 5 59	10.6	10.7	A2	1	..	21394b
32	2358	0.2	- 9 24	8.6	8.6	Ao	2	..	20896b	82	2343	0.4	- 7 7	9.0	9.0	B9	6	..	21394b
33	2375	0.2	-13 39	8.0	9.4	Ma	3	..	20896b	83	2379	0.4	-13 13	9.9	9.9	Ao	2	..	20896b
34	2228	0.2	-19 26	6.06	5.9	B3	10	5,10	11036b	84	6420	0.4	-24 5	7.5	8.3	A5	3	0,7	11036b
35	2226	0.2	-19 29	9.1	8.9	Ao	4	..	44429b	85	5530	0.4	-25 25	6.66	8.4	K2	7	3,3	44429b
36	2138	0.2	-22 32	9.3	9.2	A3	2	..	44429b	86	5470	0.4	-26 21	8.6	9.2	Ko	2	..	40080b
37	4937	0.2	-27 34	10.1	9.5	Ma	2	..	40080b	87	4946	0.4	-27 30	11.0	9.5	A3	1	..	40080b
38	5391	0.2	-28 7	10.5	9.2	G5	1	..	40080b	88	4796	0.4	-32 23	5.40	7.8	Ma	..	5,6	56,124
39	5384	0.2	-28 8	10.8	9.2	A5	2	..	40080b	89	4160	0.4	-36 8	9.2	9.2	F8	2	..	13054b
40	3791	0.2	-40 6	9.00	8.9	A2	5	..	18289b	90	3795	0.4	-40 19	10.6	10.1	A2	2	..	18289b
41	3695	0.2	-41 28	8.3	9.5	Ko	3	..	18289b	91	3796	0.4	-40 52	10.1	9.5	Ao	3	..	18289b
42	3880	0.2	-43 53	8.6	8.4	F2	5	..	39914b	92	3710	0.4	-46 1	8.8	9.8	K2	2	..	18300b
43	3996	0.2	-44 31	10.5	10.2	G	2	..	18300b	93	3542	0.4	-47 49	10.2	9.6	Ao	3	..	18300b
44	3997	0.2	-44 37	10.2	9.9	Fo	2	..	18300b	94	3431	0.4	-48 22	9.6	9.5	Fo	4	..	18300b
45	3121	0.2	-50 8	9.49	9.5	Ao	3	..	24598b	95	3432	0.4	-48 55	10.5	10.4	Ko	1	..	18300b
46	1368	0.2	-52 17	8.2	8.4	Fo	8	..	24598b	96	1516	0.4	-53 10	8.6	8.9	Ao	7	..	24598b
47	1428	0.2	-55 39	8.9	9.5	K2	3	..	24598b	97	942	0.4	-62 9	9.0	9.3	Fo	2	..	15516b
48	1381	0.2	-57 41	10.1	10.1	Ao	2	..	40088b	98	807	0.4	-65 2	9.73	9.8	A2	1	..	15274b
49	523	0.3	+68 15	8.8	9.4	Go	3	..	37713i	99	1754	0.5	+35 4	8.27	9.27	Ko	4	..	37448i
50	1745	0.3	+34 12	8.5	8.8	F2	4	..	37448i	100	1902	0.5	+ 4 37	8.6	8.7	A2	3	..	38271i

## THE HENRY DRAPER CATALOGUE.

66900

8<sup>h</sup> 0<sup>m</sup>.5

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	2356	0.5	- 5 15	9.20	10.20	Ko	2	..	21394b	51	2212	0.7	- 4 22	8.4	8.4	Ao	5	..	21394b
2	2445	0.5	- 6 37	9.9	10.0	A5	2	..	21394b	52	2357	0.7	- 5 24	9.2	10.0	G5	3	..	21394b
3	2214	0.5	- 8 23	9.2	9.8	Go	4	..	21394b	53	2344	0.7	- 7 43	9.0	9.0	Ao	6	..	21394b
4	2241	0.5	-15 38	8.2	8.6	F5	3	..	18976b	54	2361	0.7	- 9 38	8.2	9.2	K	2	..	20896b
5	2277	0.5	-16 44	7.8	8.8	Ko	6	..	18976b	55	2362	0.7	- 9 42	9.3	9.4	A2	1	..	20896b
6	2317	0.5	-17 30	9.3	9.3	B9	3	..	18976b	56	2363	0.7	- 9 50	6.94	6.92	B9	10	..	20896b
7	2318	0.5	-18 3	9.5	10.0	F8	2	..	18976b	57	2372	0.7	-10 20	9.1	9.6	F8	1	..	20896b
8	2230	0.5	-19 47	9.2	9.6	K2	1	..	44429b	58	2243	0.7	-15 19	8.4	9.4	Ko	3	..	20857b
9	2370	0.5	-20 58	9.7	9.5	A2	2	..	44429b	59	2279	0.7	-16 22	8.7	8.8	A3	3	..	18976b
10	6755	0.5	-23 33	8.8	9.5	Ko	3	..	44429b	60	6429	0.7	-25 1	9.8	9.2	Ao	2	..	44429b
11	6423	0.5	-24 15	9.0	8.7	B9	5	..	44429b	61	5479	0.7	-26 14	8.8	8.9	B9	5	..	40080b
12	4949	0.5	-27 34	11.0	9.8	A2	1	..	40080b	62	5478	0.7	-26 22	10.8	9.2	Ao	2	..	40080b
13	5560	0.5	-31 2	9.0	9.2	Ao	5	..	40080b	63	4951	0.7	-27 47	10.3	9.2	G5	2	..	40080b
14	4011	0.5	-38 8	8.3	8.9	F2	3	..	13054b	64	4954	0.7	-27 53	10.8	9.2	A	2	R	40080b
15	3840	0.5	-42 48	10.5	9.8	B8	3	..	18289b	65	5407	0.7	-28 15	9.8	8.9	B9	5	..	40080b
16	3433	0.5	-48 4	10.5	10.1	B9	3	..	18300b	66	5406	0.7	-28 37	10.3	9.5	G	1	..	40080b
17	3305	0.5	-50 3	9.24	9.0	B8	5	..	24598b	67	5478	0.7	-29 23	11.0	10.1	A	1	..	40080b
18	964	0.5	-59 37	8.1	8.3	G5	4	R	40088b	68	4166	0.7	-36 8	10.3	9.5	Ao	2	..	13054b
19	816	0.5	-69 54	8.5	8.5	Ao	7	..	15274b	69	4018	0.7	-39 1	10.8	9.8	Ao	2	..	18289b
20	654	0.5	-72 58	6.42	6.3	A2	7	0.9	9003b	70	4004	0.7	-44 41	10.9	10.2	Ao	1	..	18300b
21	1858	0.6	+24 27	8.7	9.1	F5	2	..	37503i	71	3438	0.7	-48 42	9.2	8.7	B9	7	..	18300b
22	1749	0.6	+15 38	7.6	8.0	F5	6	..	37605i	72	3125	0.7	-50 10	8.19	8.4	F8	6	..	24598b
23	1869	0.6	+ 9 38	8.9	8.9	Ao	5	..	20710b	73	1518	0.7	-53 44	8.9	9.2	G5	5	..	24598b
24	1891	0.6	+ 3 29	8.2	9.0	G5	3	..	38271i	74	1384	0.7	-57 22	9.7	10.1	F5	2	..	40088b
25	1868	0.6	+ 2 28	6.77	6.77	Ao	7	..	38271i	75	873	0.7	-63 14	8.8	9.6	G5	1	..	15516b
26	1991	0.6	+ 1 8	8.4	9.6	K5	2	..	38271i	76	1098	0.8	+58 16	9.2	9.3	A2	2	..	37676i
27	2206	0.6	- 3 31	9.1	9.4	Fo	3	..	21394b	77	1705	0.8	+49 34	8.67	9.09	F5	3	..	38188i
28	2210	0.6	- 4 45	8.8	9.8	Ko	3	..	21394b	78	1683	0.8	+32 44	8.3	9.4	K2	3	..	37448i
29	2142	0.6	-22 9	7.8	8.4	Go	3	5.7	11036b	79	1872	0.8	+ 5 51	7.8	8.8	Ko	3	..	37553i
30	5475	0.6	-26 13	10.8	9.5	A3	3	..	40080b	80	1949	0.8	- 1 25	9.1	9.2	A2	1	..	24493b
31	5402	0.6	-28 7	10.3	9.5	K2	1	..	40080b	81	2359	0.8	- 5 24	9.9	10.4	F8	2	..	21394b
32	5474	0.6	-29 41	7.62	8.7	Ma	5	..	40080b	82	2346	0.8	- 7 16	9.3	10.1	G5	2	..	21394b
33	4802	0.6	-32 17	9.3	8.6	A2	2	..	12788b	83	2215	0.8	- 8 9	8.2	9.0	G5	6	..	21394b
34	4161	0.6	-35 45	9.3	9.2	F8	1	..	13054b	84	2374	0.8	-10 31	9.7	9.7	Ao	1	..	20896b
35	3700	0.6	-41 7	10.6	10.4	Ko	1	..	18289b	85	2375	0.8	-11 2	8.7	9.9	K5	1	R	20896b
36	3845	0.6	-42 44	10.5	10.8	A3	3	..	18289b	86	2229	0.8	-11 12	9.5	9.5	Ao	2	..	20896b
37	3885	0.6	-43 18	10.2	9.8	Ao	2	..	18289b	87	2380	0.8	-13 59	8.6	8.6	Ao	6	..	20896b
38	3727	0.6	-46 17	8.6	8.8	A2	7	3.1	18300b	88	2362	0.8	-14 23	8.6	9.8	K5	1	..	20896b
39	3437	0.6	-48 8	9.2	10.0	G5	2	..	18300b	89	2321	0.8	-17 41	8.8	9.6	G5	3	..	18976b
40	3306	0.6	-49 13	7.3	7.8	Ko	..	0.8	28,201	90	2160	0.8	-18 29	9.7	10.0	Fo	3	..	18976b
41	3307	0.6	-49 40	9.4	9.3	Ao	4	..	24598b	91	2159	0.8	-19 6	8.8	8.4	B9	6	1.1	18976b
42	2819	0.6	-51 30	10.0	10.4	G5	1	..	24598b	92	2143	0.8	-22 56	9.5	9.8	K5	1	..	44434b
43	965	0.6	-59 32	8.9	8.8	B9	4	..	40088b	93	4957	0.8	-27 22	11.0	9.2	A3	3	..	40080b
44	327	0.7	+75 40	8.27	9.45	K5	2	..	38187i	94	5480	0.8	-29 9	10.1	9.2	A2	3	..	40080b
45	1112	0.7	+60 9	8.7	9.1	F5	2	..	37676i	95	4172	0.8	-36 29	8.9	9.2	A2	2	..	13054b
46	1251	0.7	+55 45	8.9	9.5	Go	1	..	37409i	96	3951	0.8	-39 8	8.1	10.1	K5	1	..	18289b
47	1511	0.7	+50 26	7.35	8.35	Ko	4	..	38188i	97	3805	0.8	-40 18	11.3	10.1	A	1	..	18289b
48	1854	0.7	+22 45	7.22	7.78	Go	6	..	37605i	98	3705	0.8	-42 1	8.3	8.9	A5	3	..	39914b
49	1852	0.7	+22 23	8.5	9.0	F8	3	..	37605i	99	3848	0.8	-42 33	10.5	10.4	Ko	1	..	18289b
50	1903	0.7	- 0 17	6.60	7.60	Ko	7	..	38271i	100	3847	0.8	-42 40	10.5	10.1	Ko	1	..	18289b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

67000

8<sup>h</sup> 0<sup>m</sup>.8

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	3731	0.8	-46 21	11.5	10.2	A3	2	..	18300b	51	2252	1.1	-21 21	9.2	9.2	A5	3	..	44429b
2	3441	0.8	-48 46	10.2	9.5	B9	3	..	18300b	52	6438	1.1	-24 52	9.1	9.7	Ko	1	..	44429b
3	3440	0.8	-48 56	10.0	10.4	Ko	2	..	18300b	53	4972	1.1	-27 50	9.8	9.2	Ao	2	..	40080b
4	1487	0.8	-55 1	9.8	10.1	Fo	3	..	24598b	54	5492	1.1	-29 47	8.8	8.7	A2	5	..	40080b
5	1252	0.9	+55 22	9.0	9.6	Go	2	..	37409i	55	4171	1.1	-35 52	8.3	8.1	B9	3	..	8897b
6	1391	0.9	+51 48	4.87	4.93	A2	..	2,10	56,85	56	3812	1.1	-40 42	9.5	9.8	G5	2	..	18289b
7	1356	0.9	+46 29	8.6	9.4	G5	2	..	37704i	57	3813	1.1	-40 49	9.9	9.5	Ao	4	..	18289b
8	1811	0.9	+42 6	9.2	9.5	F2	1	..	37463i	58	3710	1.1	-41 23	8.7	8.9	A2	7	..	18289b
9	1644	0.9	+33 33	7.9	8.3	F5	6	..	37448i	59	3852	1.1	-42 28	7.8	7.7	B3	6	2,3-	8897b
10	1904	0.9	- 0 29	8.4	9.2	G5	2	..	38207i	60	3897	1.1	-43 35	10.5	9.6	A5	2	..	18289b
11	2450	0.9	- 6 9	8.7	9.7	Ko	3	..	21394b	61	3896	1.1	-43 57	7.4	8.1	G5	5	..	39914b
12	2451	0.9	- 6 59	8.2	8.3	A2	8	..	21394b	62	4012	1.1	-44 44	9.8	9.4	Ao	3	..	18300b
13	2452	0.9	- 7 5	9.2	9.5	Fo	3	..	21394b	63	2823	1.1	-51 26	10.0	10.0	B8	2	..	24598b
14	2377	0.9	-10 23	8.2	9.2	Ko	2	..	20896b	64	269	1.2	+79 49	7.83	8.39	Go	5	..	37493i
15	2381	0.9	-13 17	7.42	7.42	Ao	9	..	20896b	65	1861	1.2	+38 53	6.99	7.27	Fo	7	..	37448i
16	2162	0.9	-18 7	9.0	9.1	A2	5	..	18976b	66	1745	1.2	+35 56	7.8	7.9	A5	5	..	37448i
17	2161	0.9	-18 22	9.3	9.3	Ao	4	..	18976b	67	2185	1.2	+ 0 34	8.4	8.4	Ao	5	0,5	12774b
18	2375	0.9	-20 37	8.8	9.5	K2	1	..	44429b	68	2234	1.2	-11 52	9.1	9.9	G5	1	..	20896b
19	2145	0.9	-22 41	10.2	9.6	B9	1	..	44429b	69	2328	1.2	-12 44	8.6	9.6	Ko	1	..	20896b
20	5545	0.9	-25 53	9.6	9.5	A3	3	..	44434b	70	2382	1.2	-13 49	8.6	9.8	K5	2	..	20896b
21	4961	0.9	-27 22	9.6	9.2	G5	2	..	40080b	71	2365	1.2	-14 13	9.0	9.0	Ao	3	..	20896b
22	4964	0.9	-27 48	10.8	9.0	A3	3	..	40080b	72	2250	1.2	-16 4	9.2	9.1	B5	3	..	20857b
23	4295	0.9	-34 37	7.9	7.8	Fo	7	..	42909b	73	2324	1.2	-17 49	9.2	9.2	Ao	3	..	18976b
24	3849	0.9	-42 24	10.0	9.2	Ao	3	2,2	18289b	74	5488	1.2	-26 28	8.0	9.2	Ma	3	..	40080b
25	3850	0.9	-42 42	10.0	9.8	B9	2	..	18289b	75	5490	1.2	-26 31	9.8	9.2	A2	2	..	40080b
26	1505	0.9	-56 19	9.0	9.2	F5	3	..	40088b	76	5489	1.2	-26 42	9.0	9.7	K5	1	..	40080b
27	1612	1.0	+48 28	8.13	9.31	K5	3	..	37704i	77	5420	1.2	-28 22	10.5	9.2	A2	2	..	40080b
28	1994	1.0	+ 1 46	8.2	8.3	A2	4	..	38271i	78	4507	1.2	-33 18	6.57	7.4	F5	8	..	12788b
29	1995	1.0	+ 1 29	7.7	8.0	K5	4	..	38271i	79	3899	1.2	-43 41	9.6	9.0	A5	2	..	39914b
30	2207	1.0	- 3 55	9.3	9.4	A2	2	..	21394b	80	3444	1.2	-48 27	10.0	9.5	Ao	3	..	18300b
31	2163	1.0	-18 21	9.7	9.8	A3	2	..	18976b	81	3131	1.2	-50 35	9.6	9.5	A3	3	..	24598b
32	2146	1.0	-23 2	10.2	9.8	A3	2	..	44434b	82	1522	1.2	-53 54	8.7	9.2	A2	5	..	24598b
33	4969	1.0	-27 23	10.3	9.2	F2	2	..	40080b	83	968	1.2	-59 6	9.9	10.4	F8	1	..	40088b
34	4967	1.0	-27 39	11.3	9.7	Fo	1	..	40080b	84	969	1.2	-59 56	8.7	10.8	F8	2	..	40088b
35	4965	1.0	-27 54	9.8	9.2	A2	2	..	40080b	85	1513	1.3	+50 1	9.02	9.58	G	1	..	38188i
36	5488	1.0	-29 39	8.2	8.9	K5	3	..	40080b	86	1746	1.3	+36 32	7.8	7.9	A2	7	..	37448i
37	4220	1.0	-37 16	9.0	9.8	K	1	..	13054b	87	1735	1.3	+31 51	7.8	8.3	F8	4	..	37448i
38	3811	1.0	-41 0	10.1	10.1	G5	1	..	18289b	88	1734	1.3	+30 59	8.5	9.3	G5	1	..	38218i
39	3708	1.0	-41 28	9.7	9.2	A2	5	..	18289b	89	1751	1.3	+15 27	8.4	9.2	G5	2	..	37552i
40	3738	1.0	-46 46	9.2	9.0	G5	5	..	18300b	90	1824	1.3	+14 21	9.1	9.2	A3	2	..	37552i
41	3550	1.0	-47 32	7.4	7.1	B9	4	..	8952b	91	1872	1.3	+ 6 41	8.8	9.2	F5	3	E	38271i
42	1434	1.0	-55 49	8.5	10.1	K5	2	..	24598b	92	1874	1.3	+ 5 27	8.8	8.8	Ao	1	..	38271i
43	525	1.1	+67 30	8.2	8.8	Go	3	..	37713i	93	2214	1.3	- 4 9	9.0	9.1	A2	3	..	21394b
44	1706	1.1	+49 18	7.27	7.22	B8	6	0,7	38188i	94	2329	1.3	-12 39	9.1	9.1	Ao	2	..	20896b
45	1536	1.1	+47 16	8.0	8.1	A2	6	..	37704i	95	2384	1.3	-13 40	8.8	9.8	Ko	2	..	20896b
46	1688	1.1	+28 53	8.6	9.6	Ko	1	..	38218i	96	4980	1.3	-27 19	9.6	9.0	F2	2	..	40080b
47	1888	1.1	+23 3	7.52	8.30	G5	4	..	37605i	97	4978	1.3	-27 46	9.0	8.7	Ao	6	..	40080b
48	1763	1.1	+21 11	8.0	8.8	G5	6	..	37605i	98	5497	1.3	-29 17	10.1	9.5	F2	1	..	40080b
49	2424	1.1	- 2 29	8.6	9.1	F8	3	..	24493b	99	4508	1.3	-34 2	7.7	7.8	F5	7	..	42909b
50	2216	1.1	- 9 2	9.2	10.6	Mb	1	..	21394b	100	3714	1.3	-41 23	10.6	10.1	B8	1	..	18289b



## THE HENRY DRAPER CATALOGUE.

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8<sup>h</sup> 1<sup>m</sup>.3

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	3716	1.3	-41 56	9.3	8.9	Ao	3	..	39914b	51	1763	1.6	+17 29	9.5	9.8	F	1	..	37605i
2	3903	1.3	-43 34	10.0	9.6	A5	2	..	18289b	52	2190	1.6	+ 0 17	9.1	9.2	A2	2	3,I	15244b
3	3744	1.3	-46 38	9.6	9.3	F8	4	..	18300b	53	2208	1.6	- 3 13	8.8	9.9	K2	2	..	24493b
4	3746	1.3	-46 51	10.0	9.8	Ao	3	..	18300b	54	2219	1.6	- 4 37	9.3	10.1	G5	2	..	21394b
5	3556	1.3	-47 43	8.5	8.1	Ao	1	..	8952b	55	2218	1.6	- 4 41	9.0	10.4	Ma	3	..	21394b
6	3316	1.3	-49 37	8.8	8.9	Ao	6	..	24598b	56	2220	1.6	- 5 3	8.75	9.75	Ko	3	..	21394b
7	971	1.3	-59 47	9.1	9.1	Ao	3	0,2	40088b	57	2458	1.6	- 6 15	9.2	9.3	A2	7	..	21394b
8	1863	1.4	+38 16	8.7	9.2	F8	2	..	38611i	58	2221	1.6	- 8 56	8.6	8.6	Ao	3	..	21394b
9	1725	1.4	+10 2	7.87	7.87	Ao	4	..	37553i	59	2222	1.6	- 8 57	5.92	5.92	Ao	10	R	20896b
10	1872	1.4	+ 2 14	8.4	8.8	F5	3	..	38271i	60	2334	1.6	-12 59	9.0	9.0	Ao	5	..	20896b
11	1955	1.4	- 2 7	7.37	8.15	G5	5	..	38207i	61	5566	1.6	-25 28	9.0	8.9	A5	3	..	44429b
12	2216	1.4	- 4 32	9.3	10.3	Ko	2	..	21394b	62	5510	1.6	-29 42	9.1	8.7	Ao	7	1,4	40080b
13	2454	1.4	- 7 5	9.0	9.0	Ao	6	..	21394b	63	5509	1.6	-30 4	8.04	8.7	F8	6	..	40080b
14	2347	1.4	- 7 28	8.2	8.2	Ao	8	..	21394b	64	4516	1.6	-33 4	9.3	8.9	Ao	1	..	12788b
15	2218	1.4	- 8 12	9.2	9.3	A2	5	..	21394b	65	4182	1.6	-36 27	8.6	8.6	Ao	3	..	8897b
16	2219	1.4	- 9 1	9.9	9.9	Ao	2	..	21394b	66	3858	1.6	-42 24	9.8	9.2	Go	3	0,1	18289b
17	2330	1.4	-12 22	9.0	9.3	Fo	3	..	20896b	67	3446	1.6	-48 46	10.9	9.8	B9	3	..	18300b
18	2253	1.4	-16 6	7.8	9.0	K5	2	..	20857b	68	1491	1.6	-54 24	9.0	9.8	Go	4	..	24598b
19	2326	1.4	-18 1	8.6	9.6	Ko	3	..	18976b	69	1493	1.6	-54 30	8.7	9.2	Go	6	..	24598b
20	2165	1.4	-19 2	9.3	9.3	Ao	2	..	20857b	70	956	1.6	-61 51	7.4	7.7	B9	3	..	8913b
21	2255	1.4	-21 35	8.6	9.5	Ko	3	..	44429b	71	857	1.6	-65 18	9.2	9.2	Ao	4	..	15274b
22	6446	1.4	-24 56	8.50	9.2	Ko	3	..	44429b	72	1202	1.7	+54 35	8.8	9.6	G5	1	..	38188i
23	4982	1.4	-27 23	11.7	9.5	A3	2	..	40080b	73	1203	1.7	+53 57	8.8	9.8	Ko	1	..	38188i
24	4981	1.4	-27 30	10.5	9.5	Ao	2	..	40080b	74	1865	1.7	+38 49	7.25	8.43	K5	3	..	37448i
25	3720	1.4	-41 49	7.9	9.2	K2	1	..	39914b	75	1541	1.7	+27 19	7.8	7.8	Ao	6	..	37503i
26	3726	1.4	-45 48	10.0	10.3	K2	1	..	18300b	76	1838	1.7	+13 35	9.5	10.0	F8	2	..	38960i
27	3728	1.4	-45 51	7.8	8.7	Ko	7	..	18300b	77	1727	1.7	+10 17	6.84	7.62	G5	5	..	37553i
28	3559	1.4	-47 30	9.6	9.3	F5	4	..	18300b	78	2363	1.7	- 5 20	9.0	9.6	Go	3	..	21394b
29	3563	1.4	-47 58	10.2	9.6	B9	4	..	18300b	79	2237	1.7	-11 17	9.0	10.4	Ma	1	..	20896b
30	1387	1.4	-57 14	9.2	10.4	K5	1	..	40088b	80	2336	1.7	-12 55	9.5	9.6	A5	1	..	20896b
31	1749	1.5	+36 20	8.8	9.2	F5	2	..	37448i	81	2167	1.7	-18 47	9.2	9.6	F5	3	..	20857b
32	1556	1.5	+28 7	8.7	8.7	A	2	E	37503i	82	2382	1.7	-20 14	8.73	9.8	K5	1	..	44429b
33	1762	1.5	+17 37	8.5	8.8	F2	8	..	37605i	83	2258	1.7	-21 37	9.2	8.9	B9	4	..	44429b
34	1770	1.5	+12 15	8.6	9.2	Go	1	..	38156i	84	2148	1.7	-22 54	9.2	9.5	G5	2	..	44429b
35	1872	1.5	+ 9 6	8.8	8.9	A2	7	R	20710b	85	5500	1.7	-26 32	9.1	9.5	Go	1	..	40080b
36	2362	1.5	- 5 27	9.9	9.9	Ao	2	..	21394b	86	5432	1.7	-28 50	10.8	9.7	A2	1	..	40080b
37	2348	1.5	- 7 55	9.5	10.5	Ko	2	..	21394b	87	5605	1.7	-31 3	9.6	9.5	A2	3	..	40080b
38	2367	1.5	- 9 22	8.0	9.0	Ko	3	..	20896b	88	4311	1.7	-34 24	9.5	9.0	Ao	3	..	42909b
39	2236	1.5	-11 32	8.6	9.8	K5	1	..	20896b	89	4184	1.7	-36 13	9.5	9.2	Ao	2	..	13054b
40	2240	1.5	-19 36	6.76	7.2	B9	7	..	11036b	90	4049	1.7	-38 29	var.	var.	Nb	1	R	18289b
41	2380	1.5	-20 39	8.2	8.6	G5	4	..	44429b	91	4048	1.7	-38 46	7.5	8.7	A5	5	..	13054b
42	4986	1.5	-27 9	8.4	8.9	Fo	6	..	40080b	92	3966	1.7	-40 2	9.9	10.1	A2	2	..	18289b
43	4984	1.5	-27 35	10.8	9.2	Ao	3	..	40080b	93	3722	1.7	-41 6	10.6	10.1	Go	1	..	18289b
44	5427	1.5	-28 47	10.1	9.3	F8	2	..	40080b	94	4023	1.7	-44 8	9.8	9.8	Ko	2	..	18289b
45	5504	1.5	-29 23	9.3	9.2	A2	3	..	40080b	95	3734	1.7	-45 34	10.0	8.7	A3	7	..	18300b
46	5604	1.5	-30 30	8.0	8.3	Fo	5	..	40080b	96	1375	1.7	-52 52	9.5	10.1	G	1	..	24598b
47	1254	1.6	+55 34	6.89	7.17	Fo	7	..	37676i	97	973	1.7	-59 52	8.8	8.8	Ao	3	0,2	40088b
48	1392	1.6	+51 37	8.2	8.3	A2	4	..	38188i	98	1048	1.7	-60 14	8.7	8.7	A2	3	..	15516b
49	1645	1.6	+30 45	8.7	9.3	Go	2	..	38218i	99	858	1.7	-65 44	7.9	8.7	G5	5	..	8913b
50	2003	1.6	+20 6	7.75	8.25	F8	5	..	37605i	100	820	1.7	-69 45	6.82	8.3	Go	8	..	15274b



## ANNALS OF HARVARD COLLEGE OBSERVATORY.

67200

8<sup>h</sup> 1<sup>m</sup>.8

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	307	1.8	+76 9	7.8	7.8	Ao	5	..	38187i	51	865	1.9	-67 26	9.5	9.5	A	4	..	15274b
2	1393	1.8	+51 14	8.8	9.3	F8	2	..	38188i	52	866	1.9	-67 30	8.6	8.6	Ao	6	0,2	15274b
3	1786	1.8	+41 47	9.4	9.5	A2	1	..	37463i	53	401	2.0	+72 21	8.1	9.1	Ko	2	..	38187i
4	1866	1.8	+38 10	7.8	8.9	K2	3	..	37448i	54	1716	2.0	+44 20	8.4	9.2	G5	3	..	37704i
5	1646	1.8	+30 49	9.2	10.6	Mb	..	..	M	55	1760	2.0	+35 37	9.1	10.1	Ko	1	..	37448i
6	1728	1.8	+10 26	8.2	8.49	Fo	2	..	37553i	56	1908	2.0	+4 44	9.5	9.6	A3	1	..	38271i
7	1920	1.8	+7 0	8.8	9.2	F5	2	E	38271i	57	2211	2.0	-3 44	8.2	9.0	G5	3	..	38207i
8	1957	1.8	-1 20	7.8	8.8	Ko	3	..	38207i	58	2222	2.0	-4 37	10.2	10.6	F5	2	..	21394b
9	2364	1.8	-5 13	9.9	10.3	F5	2	..	21394b	59	2226	2.0	-8 18	9.3	9.9	Go	4	..	21394b
10	2338	1.8	-12 50	8.4	8.5	A5	5	..	20896b	60	2372	2.0	-9 24	9.0	9.1	A2	2	..	20896b
11	2385	1.8	-13 20	9.2	9.2	Ao	3	..	20896b	61	2243	2.0	-19 33	8.0	8.3	Ko	2	..	11036b
12	2289	1.8	-17 4	9.2	9.3	A2	3	..	20857b	62	5002	2.0	-27 57	7.6	8.4	Fo	7	..	40080b
13	2331	1.8	-18 6	7.8	7.8	Ao	5	0,9	11036b	63	5440	2.0	-28 47	9.3	8.9	B9	5	..	40080b
14	2169	1.8	-18 27	10.2	10.2	A	1	..	20857b	64	4526	2.0	-33 16	10.3	8.4	A	2	..	12788b
15	6788	1.8	-23 53	10.3	9.5	B8	3	..	44429b	65	3975	2.0	-39 58	9.50	9.8	Fo	3	..	18289b
16	5504	1.8	-26 24	10.8	9.5	B9	2	..	40080b	66	3829	2.0	-40 5	9.9	9.5	Ao	4	..	18289b
17	4522	1.8	-33 36	9.0	8.9	A2	1	..	12788b	67	3871	2.0	-42 15	8.6	8.3	Fo	3	2,4-	8897b
18	4185	1.8	-36 44	8.4	8.6	A3	2	..	8897b	68	3913	2.0	-44 2	8.3	7.8	A	4	..	39914b
19	3726	1.8	-41 14	10.3	10.4	K2	1	..	18289b	69	3741	2.0	-45 7	8.2	8.2	A	7	R	18300b
20	1525	1.8	-53 44	9.6	10.4	G5	2	..	24598b	70	3742	2.0	-45 7	8.6	8.5	A	..	..	..
21	1494	1.8	-54 11	7.7	8.6	Ko	8	..	24598b	71	3744	2.0	-45 32	10.5	9.8	B9	3	..	18300b
22	173	1.9	+84 19	8.9	9.2	Fo	3	..	37546i	72	3759	2.0	-46 32	9.6	9.0	A6	4	..	18300b
23	1113	1.9	+60 14	8.8	9.3	F8	2	..	37676i	73	3570	2.0	-47 59	10.2	10.3	G5	2	..	18300b
24	1102	1.9	+58 33	6.05	7.05	Ko	7	..	37676i	74	3453	2.0	-48 19	10.9	10.4	B8	2	..	18300b
25	1753	1.9	+34 21	7.48	7.54	A2	8	..	37448i	75	3454	2.0	-48 48	10.9	10.1	F5	2	..	18300b
26	1863	1.9	+24 19	8.5	9.5	Ko	3	..	37503i	76	1495	2.0	-54 42	7.9	8.0	B9	3	..	8952b
27	1892	1.9	+23 5	8.7	8.7	Ao	3	..	37605i	77	1049	2.0	-60 37	8.1	8.0	B8	6	..	15516b
28	1862	1.9	+21 52	5.38	5.94	Go	10	R	37605i	78	811	2.0	-65 2	9.26	9.3	F2	3	..	15274b
29	1755	1.9	+15 17	9.1	9.5	F5	2	..	37552i	79	821	2.0	-69 44	8.0	9.1	K2	3	..	15274b
30	1921	1.9	+7 35	7.6	7.9	F2	5	..	37553i	80	758	2.1	+63 26	8.5	8.6	A3	3	..	37713i
31	1997	1.9	+1 39	8.8	9.8	Ko	2	..	38271i	81	1691	2.1	+28 53	9.1	9.2	A3	2	..	38218i
32	2192	1.9	+0 27	8.4	9.4	Ko	2	5,1	15244b	82	1863	2.1	+22 44	9.5	9.8	Fo	2	..	37503i
33	2430	1.9	-2 41	9.0	9.0	Ao	4	..	24493b	83	1730	2.1	+10 6	8.67	9.23	Go	3	..	20710b
34	2221	1.9	-5 1	9.5	10.5	Ko	1	..	21394b	84	2212	2.1	-3 35	9.2	10.3	K2	2	..	21394b
35	2387	1.9	-13 23	9.2	9.3	A2	3	..	20896b	85	2223	2.1	-4 34	9.7	10.5	G5	2	..	21394b
36	2290	1.9	-16 10	9.9	9.9	Ao	1	..	20857b	86	2350	2.1	-8 3	9.9	10.7	G5	2	..	21394b
37	2291	1.9	-16 55	8.6	9.6	Ko	3	..	20857b	87	2372	2.1	-14 35	8.8	9.2	F5	2	..	20857b
38	2150	1.9	-22 35	9.7	9.2	A5	2	..	44429b	88	2295	2.1	-17 1	8.0	8.8	G5	7	5,2	20857b
39	6793	1.9	-23 13	9.6	10.1	K5	1	..	44434b	89	2246	2.1	-19 50	9.2	9.6	A	1	E	20857b
40	6794	1.9	-23 18	10.8	10.0	A5	2	..	44434b	90	2245	2.1	-20 3	7.93	8.6	A3	3	..	11036b
41	5508	1.9	-26 25	10.8	9.2	B8	2	..	40080b	91	2263	2.1	-21 45	8.8	8.6	B9	6	..	44429b
42	4834	1.9	-33 2	7.7	8.0	Ao	3	..	12788b	92	2262	2.1	-21 57	8.2	9.2	K5	4	..	44429b
43	4525	1.9	-33 17	6.00	8.3	G5	..	0,7	56,124	93	5004	2.1	-27 26	10.8	9.7	Ao	3	..	40080b
44	4315	1.9	-34 37	8.6	8.7	B8	4	..	42909b	94	5006	2.1	-27 48	10.5	9.2	Ao	2	..	40080b
45	3868	1.9	-42 52	10.0	9.8	F5	3	..	18289b	95	4193	2.1	-35 41	9.9	8.0	B5	4	..	8897b
46	3757	1.9	-46 48	10.9	9.9	Ao	2	..	18300b	96	3736	2.1	-41 12	10.6	10.1	A5	2	..	18289b
47	3568	1.9	-47 20	10.9	9.9	Ao	3	..	18300b	97	3915	2.1	-43 56	8.0	7.8	B9	5	..	39914b
48	3450	1.9	-48 22	10.2	10.0	F8	4	..	18300b	98	861	2.1	-65 56	8.7	9.9	K5	1	..	15274b
49	3138	1.9	-50 18	6.00	8.0	Ko	6	..	8952b	99	643	2.1	-71 54	8.3	8.3	Ao	3	..	24527b
50	3137	1.9	-50 24	8.2	8.6	Ao	6	..	24598b	100	1867	2.2	+23 59	8.9	9.3	F5	2	..	37503i

## THE HENRY DRAPER CATALOGUE.

67300

8<sup>h</sup> 2<sup>m</sup>.2

H.D.	DM.	R.A. 1900	Dec. 1900	Ptn.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptn.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	2193	m. 2.2	° + 0 29	9.1	10.1	Ko	1	..	15244b	51	2466	m. 2.4	° - 6 51	9.3	9.9	Go	2	..	21394b
2	2390	2.2	- 13 25	9.3	9.3	Ao	2	..	20896b	52	2392	2.4	- 14 3	7.66	8.66	Ko	5	..	20896b
3	2333	2.2	- 17 33	9.2	9.1	B5	3	..	20857b	53	2261	2.4	- 15 31	8.10	9.10	Ko	5	..	20857b
4	2153	2.2	- 22 30	8.8	9.2	G5	3	..	44429b	54	2174	2.4	- 19 6	9.7	9.8	A2	2	..	20857b
5	2152	2.2	- 22 44	9.1	8.9	A3	4	..	44429b	55	2267	2.4	- 21 24	9.3	9.2	Ao	2	..	44429b
6	6464	2.2	- 24 14	10.1	9.2	A5	2	..	44429b	56	5581	2.4	- 25 39	10.5	9.8	A2	3	..	44434b
7	5579	2.2	- 25 55	10.3	9.8	B9	1	..	44434b	57	5525	2.4	- 26 11	10.1	9.8	F8	2	..	44434b
8	5007	2.2	- 27 19	10.8	9.7	F5	1	..	40080b	58	5538	2.4	- 29 7	11.7	10.1	A2	1	..	40080b
9	3979	2.2	- 39 34	8.6	10.1	K5	1	..	18289b	59	4196	2.4	- 36 7	8.1	9.2	K2	1	..	13054b
10	3876	2.2	- 42 9	10.5	9.8	B9	2	..	18289b	60	4059	2.4	- 38 52	8.1	8.3	Ao	6	..	13054b
11	3919	2.2	- 43 12	9.8	9.4	B9	3	..	18289b	61	3743	2.4	- 41 30	10.6	10.1	Ao	1	..	18289b
12	3748	2.2	- 46 0	10.0	10.5	K5	1	..	18300b	62	3767	2.4	- 46 22	9.0	9.3	K2	3	..	18300b
13	3761	2.2	- 46 27	9.6	9.0	Ao	5	..	18300b	63	3460	2.4	- 48 31	7.3	7.3	Ao	4	..	8952b
14	3762	2.2	- 46 45	9.0	8.2	Ao	7	..	18300b	64	1376	2.4	- 52 49	5.44	7.4	K2	..	2,8	56,124
15	822	2.2	- 69 29	7.7	8.8	K2	6	..	15274b	65	1497	2.4	- 54 42	7.3	7.7	A2	5	..	8952b
16	1123	2.3	+ 57 51	8.6	9.2	Go	2	..	37676i	66	1443	2.4	- 55 37	8.9	10.1	K5	2	..	24598b
17	1269	2.3	+ 56 6	7.9	8.0	A2	5	..	37676i	67	1391	2.4	- 57 43	9.0	8.9	Ao	5	..	40088b
18	1360	2.3	+ 46 4	7.6	8.4	G5	5	..	37704i	68	1144	2.5	+ 59 30	8.2	9.2	Ko	3	..	37676i
19	1825	2.3	+ 37 30	8.9	9.9	Ko	1	..	38611i	69	1613	2.5	+ 48 41	7.8	8.2	F5	4	..	37704i
20	1761	2.3	+ 35 11	9.1	9.5	F5	2	..	37448i	70	1819	2.5	+ 42 45	6.44	7.51	K2	8	..	37704i
21	1854	2.3	+ 25 51	8.2	8.6	F5	4	..	37503i	71	1642	2.5	+ 16 42	8.4	9.0	Go	3	..	37605i
22	1876	2.3	+ 9 43	7.92	7.90	B9	4	..	37553i	72	1877	2.5	+ 9 20	9.1	9.2	A2	2	..	20710b
23	2434	2.3	- 2 51	9.3	9.7	F5	2	..	21394b	73	1879	2.5	+ 5 26	8.4	9.2	G5	2	..	38271i
24	2435	2.3	- 3 5	9.0	10.1	K2	3	..	24493b	74	2225	2.5	- 4 12	8.8	8.9	A5	2	..	38207i
25	2464	2.3	- 6 12	9.0	9.3	F2	4	..	21394b	75	2268	2.5	- 21 21	8.2	8.4	F5	6	0,2	44429b
26	2353	2.3	- 7 12	9.3	10.3	Ko	2	..	21394b	76	5587	2.5	- 25 42	10.8	9.7	B9	2	..	44434b
27	2228	2.3	- 8 9	9.5	10.5	Ko	2	..	21394b	77	5016	2.5	- 27 37	11.0	9.5	A	1	..	40080b
28	2386	2.3	- 10 11	9.16	9.16	Ao	2	..	20896b	78	5015	2.5	- 27 43	11.0	9.5	A2	1	..	40080b
29	2391	2.3	- 14 1	8.6	8.9	Fo	4	..	20896b	79	5544	2.5	- 29 59	11.0	9.8	A2	1	..	40080b
30	2387	2.3	- 20 15	8.38	8.0	Ao	2	..	11036b	80	5636	2.5	- 30 31	9.1	9.5	K2	2	..	40080b
31	2266	2.3	- 22 5	9.2	8.9	A2	5	..	44429b	81	4542	2.5	- 33 45	9.2	8.9	F2	1	..	42909b
32	6468	2.3	- 24 33	10.3	9.2	Ao	3	..	44429b	82	3746	2.5	- 41 46	9.9	9.5	B9	4	..	18289b
33	6469	2.3	- 24 50	8.2	8.7	Ko	4	..	44429b	83	3882	2.5	- 43 2	10.5	10.1	A2	2	..	18289b
34	4323	2.3	- 34 28	7.9	8.1	B8	7	..	42909b	84	3923	2.5	- 43 43	10.0	10.2	G5	1	..	18289b
35	4195	2.3	- 36 5	9.3	9.2	B9	3	..	13054b	85	4032	2.5	- 44 53	6.94	7.1	B5	6	0,5	8897b
36	3831	2.3	- 40 17	9.2	9.2	Ao	6	..	18289b	86	3752	2.5	- 45 49	10.9	10.2	Ko	2	..	18300b
37	3740	2.3	- 41 27	10.3	9.8	Ao	2	..	18289b	87	1444	2.5	- 55 22	10.4	10.4	Ao	2	..	24598b
38	3922	2.3	- 43 49	10.9	10.3	Ao	1	..	18289b	88	477	2.5	- 75 47	10.0	10.0	Ao	2	..	22237b
39	3921	2.3	- 43 54	9.6	9.6	G5	2	..	18289b	89	1206	2.6	+ 54 5	9.0	9.3	F	2	..	38188i
40	4029	2.3	- 44 20	9.2	9.8	Ko	2	..	18289b	90	1718	2.6	+ 44 45	9.42	9.76	F2	2	..	37704i
41	3764	2.3	- 46 41	6.26	6.3	B3	4	2,9	42977b	91	1827	2.6	+ 37 31	9.1	9.6	F8	1	..	38611i
42	3575	2.3	- 47 50	9.6	9.0	B9	7	..	18300b	92	1911	2.6	+ 4 17	8.4	9.4	Ko	2	..	38271i
43	125	2.3	- 87 18	8.5	9.5	Ko	4	5,2	22578b	93	2368	2.6	- 5 33	9.0	9.4	F5	5	..	21394b
44	499	2.4	+ 70 28	8.7	9.3	G	3	..	37713i	94	2230	2.6	- 8 44	9.0	10.0	Ko	2	..	21394b
45	538	2.4	+ 66 18	7.8	8.1	Fo	4	..	37713i	95	5018	2.6	- 27 33	10.3	9.0	A3	3	..	40080b
46	1934	2.4	+ 19 31	7.9	8.4	F8	4	..	37605i	96	3837	2.6	- 40 10	9.05	9.2	Fo	5	..	18289b
47	1851	2.4	+ 18 17	9.1	9.5	F5	3	..	37605i	97	3578	2.6	- 48 2	10.9	9.8	Fo	3	..	18300b
48	1829	2.4	+ 14 39	8.2	9.2	Ko	4	..	37552i	98	3332	2.6	- 49 6	9.4	8.9	Ao	4	..	24598b
49	1999	2.4	+ 0 52	9.09	9.15	A2	2	..	38271i	99	1513	2.6	- 56 24	9.5	9.5	Ao	2	..	40088b
50	2436	2.4	- 2 51	9.2	10.3	K2	1	..	24493b	100	71	2.6	- 88 20	8.1	8.9	G5	4	..	15145b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

67400

8h 2m.7

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
		m.	°									m.	°						
1	1255	2.7	+55 5	9.4	9.8	F5	1	..	37409i	51	1914	2.9	- 0 33	8.8	9.3	F8	2	..	24493b
2	1544	2.7	+27 47	6.79	7.79	Ko	6	..	37503i	52	1913	2.9	- 1 4	7.9	8.0	A2	6	..	38271i
3	1761	2.7	+15 9	8.4	8.7	Fo	3	..	37552i	53	2245	2.9	-11 23	8.4	9.0	Go	4	..	20896b
4	2437	2.7	- 3 8	6.80	8.15	Ma	3	..	38207i	54	2344	2.9	-13 3	9.1	9.1	Ao	4	..	20896b
5	2370	2.7	- 5 30	10.2	10.3	A2	3	..	21394b	55	2339	2.9	-17 36	9.7	9.7	Ao	2	..	20857b
6	2371	2.7	- 5 52	8.5	9.5	Ko	5	..	21394b	56	2395	2.9	-20 16	5.25	5.33	A3	..	1,10	56,85
7	2243	2.7	-11 34	9.0	9.0	Ao	5	..	20896b	57	5464	2.9	-28 19	9.1	9.2	F8	2	..	40080b
8	2304	2.7	-17 5	6.53	7.60	K2	5	2,9	11036b	58	5555	2.9	-29 6	6.93	7.7	Go	7	..	40080b
9	5530	2.7	-26 49	6.96	7.0	B9	5	..	43040b	59	3931	2.9	-43 36	9.4	9.3	A2	3	..	18289b
10	5641	2.7	-30 32	10.5	9.8	Ao	1	..	40080b	60	3765	2.9	-45 6	8.70	8.4	Ao	7	..	18300b
11	4064	2.7	-38 36	7.02	8.0	Ko	7	..	13054b	61	3776	2.9	-46 27	10.5	9.4	Ao	3	..	18300b
12	3839	2.7	-40 19	10.8	10.1	A2	2	..	18289b	62	3338	2.9	-49 5	9.2	8.9	Fo	4	..	24598b
13	3840	2.7	-40 36	10.3	9.5	Ao	5	..	18289b	63	1529	2.9	-53 59	8.7	8.9	A5	7	..	24598b
14	3929	2.7	-43 28	9.2	9.1	Ao	2	..	39914b	64	1256	3.0	+55 27	8.8	9.4	Go	2	..	37409i
15	4034	2.7	-44 38	9.2	9.3	Ko	2	..	18300b	65	2229	3.0	- 4 42	8.7	8.8	A2	7	..	21394b
16	3759	2.7	-45 42	8.4	7.5	B9	9	..	18300b	66	2355	3.0	- 8 6	9.3	9.3	Ao	5	..	21394b
17	3758	2.7	-45 57	11.5	10.3	A5	2	..	18300b	67	2383	3.0	-10 7	9.36	9.42	A2	1	..	20896b
18	3760	2.7	-45 57	11.5	10.3	A5	2	..	18300b	68	2246	3.0	-12 5	9.7	9.7	Ao	1	..	20896b
19	975	2.7	-59 48	10.4	10.5	A2	1	..	40088b	69	2253	3.0	-19 56	9.7	9.5	A	2	E	20857b
20	815	2.7	-64 20	8.4	8.4	Ao	3	..	8913b	70	2277	3.0	-21 45	9.5	9.6	F5	1	..	44429b
21	792	2.7	-66 33	9.1	9.2	A2	5	..	15274b	71	2276	3.0	-21 46	8.8	8.9	Ko	5	..	44429b
22	1870	2.8	+38 9	8.9	9.7	G5	3	..	37448i	72	6819	3.0	-23 43	9.6	8.9	A2	5	..	44429b
23	1828	2.8	+37 52	8.7	9.3	Go	2	..	37448i	73	5559	3.0	-29 36	9.3	9.3	Go	2	..	40080b
24	2008	2.8	+20 3	8.9	8.9	Ao	4	..	37605i	74	4205	3.0	-36 34	8.7	9.0	A3	3	..	13054b
25	1842	2.8	+13 26	7.8	8.8	Ko	3	..	37553i	75	3847	3.0	-41 0	10.1	9.8	B9	2	..	18289b
26	1974	2.8	+ 8 31	8.0	8.1	A3	4	..	37553i	76	1515	3.0	-56 22	8.8	9.8	Ko	1	..	40088b
27	2439	2.8	- 2 42	9.7	10.7	K	1	..	24493b	77	1045	3.0	-58 4	8.1	9.3	K5	3	..	40088b
28	2470	2.8	- 7 2	8.8	9.9	K2	1	..	21394b	78	862	3.0	-66 3	9.0	9.3	F2	3	..	15274b
29	2232	2.8	- 8 18	8.2	9.2	Ko	7	..	21394b	79	137	3.0	-85 39	8.51	8.4	A2	7	..	15145b
30	2244	2.8	-11 56	9.3	9.8	F8	1	..	20896b	80	123	3.0	-86 31	8.9	10.0	K2	3	..	15145b
31	2398	2.8	-13 28	9.3	9.3	Ao	4	..	20896b	81	1282	3.1	+52 25	7.50	8.00	F8	4	..	38188i
32	2337	2.8	-17 44	8.8	9.4	Go	3	..	20857b	82	1752	3.1	+36 0	7.34	8.34	Ko	5	..	37448i
33	2394	2.8	-20 31	9.7	9.6	Ao	1	..	44429b	83	1831	3.1	+13 56	6.26	6.68	F5	..	0,7	56,85
34	2270	2.8	-21 24	9.2	9.2	F5	4	..	44429b	84	1882	3.1	+ 5 30	8.8	9.3	F8	3	..	20710b
35	5534	2.8	-26 37	9.8	9.2	A2	4	..	44434b	85	1880	3.1	+ 2 49	8.6	8.7	A3	2	..	38271i
36	5461	2.8	-28 16	10.8	9.2	A2	2	..	40080b	86	2195	3.1	+ 0 27	8.4	8.8	F5	4	..	38271i
37	5646	2.8	-30 5	9.34	10.1	K5	1	..	40080b	87	2216	3.1	- 3 26	8.0	9.0	Ko	2	..	38207i
38	5645	2.8	-30 52	8.0	8.3	B8	8	..	40080b	88	2217	3.1	- 4 5	8.2	8.2	Ao	3	..	38207i
39	3989	2.8	-39 48	7.28	8.3	G5	8	..	18289b	89	2473	3.1	- 6 42	8.5	9.9	Ma	3	..	21394b
40	3987	2.8	-40 3	8.00	8.9	B9	7	..	18289b	90	2385	3.1	- 9 15	9.3	10.1	G5	3	..	21394b
41	3991	2.8	-40 3	8.3	8.3	B9	8	..	18289b	91	2346	3.1	-12 40	9.1	9.1	Ao	3	..	20896b
42	3883	2.8	-42 27	10.9	10.1	Ao	1	..	18289b	92	2340	3.1	-17 19	9.3	9.6	Fo	2	..	20857b
43	3466	2.8	-48 14	10.5	10.1	A2	1	..	18300b	93	6487	3.1	-24 48	9.8	9.2	A2	2	..	44429b
44	1393	2.8	-57 29	8.1	8.6	A3	6	..	40088b	94	5543	3.1	-26 6	9.1	9.8	K2	2	..	44434b
45	319	2.9	+77 6	9.7	10.0	F	1	R	38187i	95	5471	3.1	-28 15	11.0	9.5	A2	1	..	40080b
46	500	2.9	+70 46	8.4	8.5	A3	4	..	37713i	96	5662	3.1	-30 51	11.0	10.4	A	1	..	40080b
47	524	2.9	+68 46	5.48	6.26	G5	10	..	37713i	97	3583	3.1	-47 59	10.5	9.4	B8	3	..	18300b
48	1103	2.9	+58 42	8.2	9.3	K2	1	..	37676i	98	3149	3.1	-50 56	10.9	10.1	A2	2	..	24598b
49	1272	2.9	+56 30	8.9	9.5	Go	2	..	37409i	99	401	3.2	+73 0	8.7	8.8	A2	3	..	38187i
50	1650	2.9	+30 50	8.7	9.1	F5	2	..	38218i	100	1114	3.2	+60 38	8.0	9.0	Ko	3	..	37676i

THE HENRY DRAPER CATALOGUE.

67500

8<sup>h</sup> 3<sup>m</sup>.2

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1690	3.2	+32 30	6.74	7.08	F2	8	..	37448i	51	2401	3.4	-13 13	7.16	7.66	F8	7	..	20896b
2	1651	3.2	+30 39	8.5	9.1	Go	3	..	38218i	52	2183	3.4	-18 48	9.3	9.3	A	1	..	20857b
3	1883	3.2	+ 5 39	7.6	8.6	Ko	5	..	20710b	53	2280	3.4	-21 30	9.7	9.2	B9	3	..	44429b
4	2196	3.2	+ 0 46	9.89	9.97	A3	3	..	38271i	54	5479	3.4	-28 24	10.3	9.2	B8	2	..	40080b
5	..	3.2	- 5 34	..	..	Ao	1	..	21394b	55	4217	3.4	-35 16	9.3	9.5	Ao	1	..	13054b
6	2180	3.2	-18 54	9.3	9.3	Ao	3	..	20857b	56	4211	3.4	-36 5	7.31	7.7	F5	6	..	8897b
7	2160	3.2	-22 37	var.	var.	Nb	..	R	56,215	57	3947	3.4	-43 31	8.6	7.9	B9	5	..	39914b
8	5565	3.2	-29 43	9.8	9.8	F8	1	..	40080b	58	1504	3.4	-54 52	9.1	10.1	Ko	2	..	24598b
9	4258	3.2	-37 13	9.0	10.0	K	1	..	13054b	59	826	3.4	-69 41	6.77	6.4	Ao	5	1,9	9003b
10	4256	3.2	-37 14	10.8	9.6	A2	1	..	13054b	60	1273	3.5	+56 22	9.2	9.7	F8	1	..	37409i
11	3849	3.2	-40 40	10.3	9.8	Ao	3	..	18289b	61	1258	3.5	+55 47	9.4	9.9	F8	1	..	37409i
12	3892	3.2	-42 24	9.1	9.8	Ko	2	0,1	18289b	62	1221	3.5	+53 32	6.81	7.23	F5	7	..	38188i
13	3890	3.2	-42 34	9.0	9.5	Ko	7	0,2	18289b	63	1283	3.5	+52 4	8.8	9.6	G5	1	..	38188i
14	4045	3.2	-44 58	9.8	9.9	F8	2	..	18300b	64	2012	3.5	+20 24	9.5	9.9	F5	3	..	37605i
15	1056	3.2	-60 6	7.36	7.2	Ao	4	..	8913b	65	1834	3.5	+13 58	8.8	9.6	G5	2	..	37552i
16	257	3.2	-79 21	8.3	9.5	K5	2	..	20869b	66	1884	3.5	+ 5 22	8.8	9.6	G5	2	..	20710b
17	1207	3.3	+54 32	8.0	8.5	F8	3	..	38188i	67	1900	3.5	+ 3 15	8.4	8.4	Ao	3	..	38271i
18	2199	3.3	+ 0 24	8.4	8.5	A3	3	..	24493b	68	2447	3.5	- 2 15	9.2	9.7	F8	4	..	24493b
19	2230	3.3	- 4 54	9.9	10.4	F8	2	..	21394b	69	2218	3.5	- 3 37	9.9	9.9	Ao	3	..	21394b
20	2356	3.3	- 7 30	9.2	9.3	A5	2	..	21394b	70	2232	3.5	- 4 27	10.2	10.2	A	1	..	21394b
21	2235	3.3	- 8 27	8.5	9.5	Ko	3	..	21394b	71	2231	3.5	- 4 33	9.9	9.9	Ao	4	..	21394b
22	2181	3.3	-18 53	8.8	8.8	B8	5	..	20857b	72	2238	3.5	- 8 40	9.3	9.4	A2	4	..	21394b
23	6828	3.3	-24 1	2.88	3.30	F5	..	R	28,201	73	2387	3.5	- 9 50	9.0	10.0	Ko	1	..	20896b
24	6491	3.3	-24 22	8.8	9.3	Ko	2	..	44429b	74	2310	3.5	-16 44	9.2	10.0	G5	2	..	20857b
25	5600	3.3	-25 29	9.6	8.9	B9	4	..	44429b	75	2344	3.5	-17 23	9.9	10.0	A5	1	..	20857b
26	5033	3.3	-27 23	10.8	9.5	Ao	1	..	40080b	76	5610	3.5	-25 55	9.4	9.5	Ko	1	..	44429b
27	5474	3.3	-28 12	11.0	9.7	A	1	..	40080b	77	5549	3.5	-26 5	8.6	8.9	Ko	2	..	44429b
28	3854	3.3	-40 27	9.9	9.5	Ko	3	..	18289b	78	5555	3.5	-31 43	8.8	8.9	G5	4	..	40080b
29	3893	3.3	-42 40	11.5	10.1	Ko	1	..	18289b	79	4080	3.5	-38 46	8.9	9.5	G5	2	..	13054b
30	3943	3.3	-43 8	9.2	9.6	G5	2	..	18289b	80	3859	3.5	-40 43	10.6	9.8	F8	2	..	18289b
31	3942	3.3	-43 18	9.0	8.2	B9	4	..	39914b	81	3948	3.5	-43 36	8.9	8.7	Go	2	..	39914b
32	3944	3.3	-43 52	10.9	9.8	B9	2	..	18289b	82	4051	3.5	-44 58	5.02	6.5	Ko	..	0,7-	28,201
33	3788	3.3	-46 52	10.5	9.9	Ao	2	..	18300b	83	3791	3.5	-46 50	11.5	9.9	G5	2	..	18300b
34	3586	3.3	-47 51	10.9	10.2	F5	2	..	18300b	84	3475	3.5	-48 30	10.9	10.1	A3	2	..	18300b
35	1048	3.3	-58 57	8.9	9.3	G5	3	..	40088b	85	207	3.6	+83 24	8.2	8.7	F8	5	..	37546i
36	953	3.3	-62 33	6.42	6.8	B3	..	0,8	28,201	86	1820	3.6	+41 55	8.0	8.0	Ao	3	..	37704i
37	479	3.3	-75 56	9.4	10.4	Ko	1	..	22237b	87	1767	3.6	+35 46	6.64	7.14	F8	9	..	37448i
38	282	3.3	-78 32	9.4	9.7	F2	2	..	22237b	88	1738	3.6	+10 48	8.14	8.20	A2	3	..	37553i
39	1208	3.4	+54 50	6.52	7.30	G5	6	..	37676i	89	1980	3.6	+ 8 20	7.6	7.9	Fo	4	..	37553i
40	1209	3.4	+54 3	9.4	9.7	F	1	..	38188i	90	1886	3.6	+ 5 11	8.8	9.8	Ko	2	..	38271i
41	1647	3.4	+33 40	7.66	8.66	Ko	5	..	37448i	91	1883	3.6	+ 2 28	8.8	8.8	Ao	2	..	38271i
42	1696	3.4	+29 23	6.56	7.12	Go	6	..	38218i	92	2006	3.6	+ 1 3	7.8	8.8	Ko	5	..	38271i
43	1562	3.4	+28 29	8.9	9.9	Ko	2	..	38218i	93	1919	3.6	- 1 7	8.6	8.6	Ao	4	..	24493b
44	1860	3.4	+25 5	8.1	8.9	G5	5	..	37503i	94	2450	3.6	- 2 41	4.41	4.97	Go	..	0, R	56,85
45	1645	3.4	+16 19	9.1	9.1	A	1	..	38960i	95	2388	3.6	- 9 56	9.9	10.0	A2	1	..	20896b
46	1832	3.4	+14 20	8.4	8.8	F5	2	..	37552i	96	2389	3.6	-10 4	9.71	10.71	Ko	1	..	20896b
47	1882	3.4	+ 2 12	7.6	7.6	B9	7	..	38271i	97	2395	3.6	-11 0	9.2	10.0	G5	1	..	20896b
48	1917	3.4	- 0 45	8.4	9.8	Ma	2	..	24493b	98	2250	3.6	-11 20	9.2	9.3	A2	3	..	20896b
49	2375	3.4	- 5 28	9.7	9.7	Ao	3	..	21394b	99	2345	3.6	-17 20	10.4	10.4	Ao	1	..	20857b
50	2386	3.4	- 9 8	9.5	10.3	G5	2	..	21394b	100	2398	3.6	-20 52	9.2	8.9	B8	4	..	44429b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

67600

8<sup>h</sup> 3<sup>m</sup>.6

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	2162	3.6	-23 6	9.2	9.2	Go	2	..	44429b	51	2387	3.9	-14 56	8.5	9.3	G5	3	..	20857b
2	6834	3.6	-23 52	9.4	8.9	Ao	4	..	44429b	52	2284	3.9	-21 51	7.6	8.0	G5	3	5,7	11036b
3	6502	3.6	-24 14	9.3	9.5	K2	1	..	44429b	53	4880	3.9	-32 48	9.0	8.4	A2	2	..	12788b
4	5038	3.6	-28 2	7.9	9.2	K5	2	..	40080b	54	4223	3.9	-35 43	10.3	9.6	A2	1	..	13054b
5	3863	3.6	-40 37	8.6	8.9	B9	7	..	18289b	55	3772	3.9	-41 26	7.5	8.7	K5	1	..	39914b
6	3862	3.6	-40 48	11.0	10.5	A3	1	..	18289b	56	3956	3.9	-43 27	11.5	10.2	B9	1	..	18289b
7	3950	3.6	-43 9	10.5	10.2	A2	1	..	18289b	57	3955	3.9	-43 45	10.5	10.2	A2	2	..	18289b
8	4053	3.6	-44 39	9.2	9.3	F5	3	..	18300b	58	3800	3.9	-47 0	10.5	9.1	Ao	4	..	18300b
9	4054	3.6	-44 45	9.8	9.1	Ao	4	..	18300b	59	3486	3.9	-48 35	10.9	10.5	Ao	2	..	18300b
10	3593	3.6	-47 31	10.9	9.6	Ao	3	..	18300b	60	2838	3.9	-51 44	9.8	9.5	B9	2	..	24598b
11	3479	3.6	-48 29	10.0	9.5	F2	4	..	18300b	61	1831	4.0	+37 37	8.2	8.8	Go	3	E	37448i
12	3478	3.6	-48 54	7.9	8.1	B9	7	0,2	24598b	62	1918	4.0	+4 4	8.8	9.3	F8	2	..	38271i
13	1864	3.7	+25 51	8.1	9.2	K2	3	..	37503i	63	2201	4.0	+0 34	8.8	8.8	Ao	3	..	24493b
14	2200	3.7	+0 45	7.62	8.80	K5	3	..	38271i	64	1921	4.0	-0 31	9.1	9.4	Fo	3	..	24493b
15	2233	3.7	-4 26	9.9	10.0	A3	1	..	21394b	65	1965	4.0	-1 20	9.1	9.4	Fo	2	..	24493b
16	2251	3.7	-11 24	10.2	10.3	A3	1	..	20896b	66	1964	4.0	-1 31	8.8	8.9	A5	3	..	38207i
17	2161	3.7	-22 23	9.3	9.2	A2	3	..	44429b	67	2454	4.0	-3 7	9.2	10.2	K	1	..	24493b
18	5558	3.7	-31 53	9.4	9.2	G	2	..	40080b	68	2234	4.0	-4 38	9.2	10.4	K5	1	..	21394b
19	4055	3.7	-44 6	10.5	10.2	A	1	..	18289b	69	2360	4.0	-7 13	9.0	9.1	A3	5	..	21394b
20	3777	3.7	-45 32	7.9	7.4	Ko	8	..	18300b	70	2260	4.0	-19 34	7.8	7.2	Ao	6	..	11036b
21	3480	3.7	-48 12	6.52	6.2	B3	..	2,9	28,201	71	2401	4.0	-20 14	8.73	8.9	Ko	3	..	44429b
22	1450	3.7	-55 52	8.5	8.9	Ao	7	..	24598b	72	2285	4.0	-21 32	10.2	9.8	Ao	2	..	46182b
23	1519	3.7	-56 26	9.0	9.5	F8	2	..	40088b	73	5618	4.0	-25 31	8.0	8.9	K5	3	..	44429b
24	725	3.7	-68 39	6.9	7.9	Ko	5	..	8913b	74	5587	4.0	-29 38	10.8	9.5	Ao	1	..	40080b
25	615	3.8	+65 3	9.2	9.2	A	3	R	37713i	75	5564	4.0	-31 4	9.6	9.2	Ao	2	..	40080b
26	1284	3.8	+52 19	8.2	9.2	Ko	2	..	38188i	76	5566	4.0	-31 9	8.4	8.3	B9	6	..	40080b
27	1616	3.8	+48 25	8.8	9.1	Fo	2	..	37344i	77	5563	4.0	-31 24	9.4	9.2	A2	3	..	40080b
28	1698	3.8	+29 24	7.51	8.69	K5	2	..	38218i	78	5565	4.0	-31 48	9.1	8.9	Ao	3	..	40080b
29	1887	3.8	+5 47	9.3	9.4	A3	2	..	20710b	79	4883	4.0	-32 12	9.0	9.2	Go	1	..	42909b
30	2352	3.8	-12 46	9.1	9.1	A	1	..	20896b	80	4271	4.0	-37 8	8.3	8.7	K2	3	..	13054b
31	2385	3.8	-14 52	8.6	8.6	Ao	4	..	20857b	81	3774	4.0	-41 26	8.6	9.5	Ko	1	..	39914b
32	6504	3.8	-24 18	10.5	9.2	B8	2	..	44429b	82	3902	4.0	-42 18	10.9	9.8	B9	2	..	18289b
33	6505	3.8	-24 28	9.8	8.9	A3	3	..	44429b	83	3900	4.0	-43 0	10.0	10.1	Ko	1	..	18289b
34	5045	3.8	-27 49	9.0	9.2	Ko	2	..	40080b	84	3957	4.0	-43 48	10.9	9.4	B9	3	..	18289b
35	5581	3.8	-29 24	9.8	9.2	Ao	2	..	40080b	85	1507	4.0	-54 31	9.1	9.2	F2	4	..	24598b
36	4087	3.8	-38 33	9.3	9.5	Ao	1	..	13054b	86	1059	4.0	-60 39	9.6	9.7	A2	2	..	40088b
37	4088	3.8	-38 38	10.1	9.5	Ao	1	..	13054b	87	1058	4.0	-60 46	9.0	10.2	K5	1	..	40088b
38	3866	3.8	-40 5	10.6	10.1	B9	3	..	18289b	88	796	4.0	-66 55	7.9	8.0	A2	5	..	8913b
39	3953	3.8	-44 2	9.6	10.3	K5	1	..	18289b	89	1874	4.1	+38 39	8.6	9.0	F5	2	..	38611i
40	4057	3.8	-44 19	8.9	9.3	K2	3	..	18289b	90	1728	4.1	+26 8	6.70	7.70	Ko	5	0,5	37503i
41	3780	3.8	-45 36	9.0	9.3	Ko	3	..	18300b	91	1765	4.1	+10 56	9.5	9.5	Ao	2	..	20710b
42	3597	3.8	-47 16	7.9	7.6	B8	2	..	8952b	92	2378	4.1	-5 16	9.10	9.88	G5	2	..	21394b
43	3482	3.8	-48 45	10.5	9.5	F5	3	..	18300b	93	2399	4.1	-10 51	9.9	10.0	A2	1	..	20896b
44	1533	3.8	-53 45	8.3	9.0	K5	6	..	24598b	94	2355	4.1	-12 28	8.7	9.7	Ko	1	..	20896b
45	1398	3.8	-57 58	8.8	10.8	Fo	2	..	40088b	95	2389	4.1	-14 57	8.7	9.5	G5	1	..	20857b
46	1544	3.9	+44 57	9.32	9.74	F5	2	..	37704i	96	2352	4.1	-18 7	8.6	8.6	Ao	5	..	20857b
47	2480	3.9	-6 8	9.3	10.1	G5	1	..	21394b	97	2186	4.1	-19 1	9.2	10.4	K5	1	..	20857b
48	2479	3.9	-6 29	9.7	10.3	Go	2	..	21394b	98	6846	4.1	-23 19	6.64	6.7	B5	8	3,10	11036b
49	2359	3.9	-7 17	9.5	9.6	A2	3	..	21394b	99	5566	4.1	-26 49	9.0	9.3	Ko	2	..	40080b
50	2396	3.9	-10 31	var.	var.	Ma	2	R	21394b	100	5695	4.1	-30 30	8.8	8.6	F2	4	..	40080b

## THE HENRY DRAPER CATALOGUE.

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8<sup>h</sup> 4<sup>m</sup>.1

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	5567	4.1	-31 14	9.8	9.2	Ao	2	..	4008ob	51	2262	4.3	-20 4	6.40	6.7	A3	..	0,6-	17616c
2	4273	4.1	-37 8	7.9	8.9	Ko	4	..	13054b	52	5625	4.3	-25 42	9.6	8.6	B8	4	..	44429b
3	3804	4.1	-46 20	8.2	7.6	Ao	2	..	8952b	53	5571	4.3	-26 51	11.0	10.0	A	1	..	4008ob
4	3599	4.1	-47 30	7.4	7.0	B9	6	..	8952b	54	5596	4.3	-29 8	11.0	9.5	A	1	..	4008ob
5	3600	4.1	-47 54	7.8	7.2	Ao	4	..	8952b	55	5699	4.3	-30 18	10.8	9.8	Ao	2	..	4008ob
6	829	4.1	-70 3	7.22	7.1	Ao	4	0,9	9003b	56	5701	4.3	-30 27	11.3	9.8	A2	2	..	4008ob
7	308	4.2	+76 3	7.72	8.14	F5	5	..	38187i	57	4584	4.3	-33 8	8.7	8.7	Ao	1	..	12788b
8	672	4.2	+64 19	8.6	9.4	G5	2	..	37713i	58	3784	4.3	-41 30	7.1	7.6	B3	7	5,3-	8897b
9	1554	4.2	+27 23	7.9	8.9	Ko	3	..	37503i	59	3907	4.3	-42 54	11.5	10.1	B8	1	..	18289b
10	1730	4.2	+26 11	8.9	8.9	A	2	R	38635i	60	4068	4.3	-44 51	8.5	7.2	Ao	10	..	1830ob
11	1941	4.2	+19 20	9.1	9.2	A2	3	..	37605i	61	3604	4.3	-47 45	10.5	9.9	F8	2	..	1830ob
12	1776	4.2	+17 33	7.8	8.8	Ko	3	..	37605i	62	3495	4.3	-48 6	6.9	8.0	Ko	..	0,3	56,124
13	1768	4.2	+15 3	9.5	10.1	G	1	..	37552i	63	2840	4.3	-51 39	7.1	8.3	Ko	8	..	24598b
14	1838	4.2	+14 31	9.1	9.5	F5	1	..	37552i	64	1456	4.3	-55 59	9.1	10.1	Ko	2	..	24598b
15	1881	4.2	+ 6 13	7.5	7.9	F5	4	..	37553i	65	1286	4.4	+52 38	9.4	9.8	F5	1	..	38188i
16	1889	4.2	+ 5 23	8.8	9.4	Go	1	..	38271i	66	1771	4.4	+35 0	9.07	9.35	Fo	2	..	37448i
17	2008	4.2	+ 1 34	7.8	7.8	Ao	7	..	38271i	67	1865	4.4	+25 50	5.83	6.61	G5	9	R	37503i
18	2009	4.2	+ 1 24	8.8	8.8	Ao	2	..	38271i	68	1851	4.4	+13 19	8.4	9.4	Ko	2	..	38156i
19	2203	4.2	+ 0 10	8.2	8.2	Ao	7	..	38271i	69	2205	4.4	- 0 1	8.98	9.06	A3	2	..	24493b
20	1922	4.2	- 0 9	7.28	7.28	Ao	8	..	38271i	70	2255	4.4	-11 18	8.6	8.6	Ao	5	..	20896b
21	2225	4.2	- 3 55	9.5	9.6	A3	3	..	21394b	71	2274	4.4	-15 41	8.6	8.6	Ao	3	..	20857b
22	2235	4.2	- 4 16	7.48	8.83	Ma	4	0,3-	21394b	72	2264	4.4	-19 25	9.0	8.4	Ao	6	..	20857b
23	2363	4.2	- 8 6	9.7	9.8	A5	2	..	21394b	73	6518	4.4	-24 6	8.8	8.6	Ko	4	..	44429b
24	2241	4.2	- 8 8	9.5	9.6	A5	2	..	21394b	74	5508	4.4	-28 12	10.5	8.7	B8	3	..	4008ob
25	2400	4.2	-11 3	6.25	6.23	B9	7	..	8827b	75	5600	4.4	-29 35	9.8	9.5	G5	1	..	4008ob
26	2271	4.2	-15 24	8.4	9.2	G5	2	..	20857b	76	5704	4.4	-30 47	8.0	8.6	Ao	7	..	4008ob
27	2356	4.2	-17 51	9.9	9.9	A	1	..	20857b	77	4892	4.4	-32 50	9.3	8.6	Ao	2	..	12788b
28	2261	4.2	-19 33	8.4	8.6	Ko	5	..	20857b	78	4890	4.4	-33 2	7.5	7.4	B8	6	..	12788b
29	2402	4.2	-20 23	9.2	9.2	Fo	2	..	44429b	79	4235	4.4	-35 11	9.20	9.2	B8	2	..	13054b
30	6851	4.2	-23 16	9.6	9.2	B8	2	..	44429b	80	4227	4.4	-36 8	7.67	7.7	Fo	3	..	8897b
31	5623	4.2	-25 52	11.0	9.0	Ao	2	..	44429b	81	4280	4.4	-37 43	8.6	8.6	F2	2	..	8897b
32	5569	4.2	-26 16	9.6	8.7	B9	5	..	44434b	82	3878	4.4	-40 9	9.9	10.1	Ao	3	..	18289b
33	5606	4.2	-30 29	8.6	8.6	Go	3	..	4008ob	83	3909	4.4	-43 3	9.4	10.4	K5	1	..	18289b
34	4887	4.2	-32 42	9.2	8.9	Ao	2	..	42909b	84	3355	4.4	-49 50	10.2	9.8	Ao	2	..	24598b
35	4582	4.2	-33 44	7.7	7.8	Ao	6	..	13054b	85	3166	4.4	-50 36	10.0	9.5	B8	3	..	24598b
36	4365	4.2	-34 55	7.36	7.6	A5	..	0,6-	56,124	86	976	4.4	-59 12	9.1	10.5	Ko	1	..	40088b
37	3903	4.2	-42 23	9.4	9.8	Ko	2	..	18289b	87	403	4.5	+72 45	9.2	9.3	A3	2	..	38187i
38	2839	4.2	-51 31	8.5	9.0	Go	5	..	24598b	88	1516	4.5	+49 52	8.97	9.97	Ko	1	..	38188i
39	350	4.3	+74 47	8.47	9.65	K5	2	..	38187i	89	1839	4.5	+14 48	7.59	8.01	F5	4	..	37605i
40	539	4.3	+66 33	8.4	9.2	G5	2	..	37713i	90	1852	4.5	+13 9	8.4	9.5	K2	2	..	3896oi
41	1285	4.3	+52 3	8.5	9.7	K5	1	..	38188i	91	2236	4.5	- 4 15	9.7	10.3	Go	1	..	21394b
42	1757	4.3	+36 12	8.8	9.2	F5	2	..	37448i	92	2237	4.5	- 5 3	9.9	10.0	A2	2	..	21394b
43	1778	4.3	+17 18	7.43	8.78	Ma	5	..	37605i	93	2484	4.5	- 6 29	9.9	10.0	A2	3	..	21394b
44	1849	4.3	+12 59	8.4	9.2	G5	2	..	38156i	94	2244	4.5	- 8 58	9.5	10.5	Ko	2	..	21394b
45	1905	4.3	+ 3 42	8.5	8.6	A5	1	..	38271i	95	2409	4.5	-13 42	9.3	9.4	A2	2	..	20896b
46	2204	4.3	+ 0 25	9.3	9.4	A3	2	..	24493b	96	2393	4.5	-14 17	8.0	9.4	Ma	3	..	20857b
47	1968	4.3	- 1 22	8.8	9.1	Fo	3	..	24493b	97	2190	4.5	-18 57	4.34	4.17	B3	..	0,R	1759c
48	..	4.3	- 5 0	..	..	A2	1	..	21394b	98	2403	4.5	-20 26	9.3	9.5	Ao	3	..	44429b
49	2482	4.3	- 6 25	8.8	9.6	G5	3	..	21394b	99	2290	4.5	-21 25	8.2	8.0	Ao	3	0,7	11036b
50	2243	4.3	- 8 38	9.2	10.2	Ko	2	..	21394b	100	6857	4.5	-23 15	8.8	8.9	G5	4	0,1	4429b

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8<sup>h</sup> 4<sup>m</sup>.5

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	6519	4.5	-24 14	9.4	8.7	Ao	4	..	44429b	51	1652	4.8	+33 48	8.6	9.1	F8	3	..	37448i
2	3786	4.5	-41 7	10.3	10.4	Ko	1	..	18289b	52	2014	4.8	+1 18	7.8	8.1	Fo	6	..	38271i
3	3911	4.5	-42 58	9.4	10.1	Ko	1	..	18289b	53	1972	4.8	-1 55	9.5	10.0	F8	1	..	24493b
4	3792	4.5	-45 31	10.9	9.9	Ao	3	..	18300b	54	2228	4.8	-3 52	8.0	9.0	Ko	1	..	38207i
5	3609	4.5	-48 2	11.5	10.2	Go	2	..	18300b	55	2229	4.8	-4 6	9.0	10.0	Ko	3	..	21394b
6	978	4.5	-59 52	9.1	10.5	Ko	2	..	40088b	56	2238	4.8	-4 54	9.2	10.3	K2	3	..	21394b
7	1274	4.6	+56 19	9.0	9.4	F5	1	..	37676i	57	2384	4.8	-5 12	9.7	10.3	Go	1	..	21394b
8	1773	4.6	+43 42	8.4	8.9	F8	3	..	37704i	58	2488	4.8	-6 34	9.1	9.1	Ao	5	..	21394b
9	1769	4.6	+11 43	8.8	8.8	Ao	1	..	38156i	59	2487	4.8	-6 37	8.7	9.7	Ko	3	..	21394b
10	2206	4.6	+0 38	8.4	8.4	Ao	3	..	38271i	60	2262	4.8	-11 8	8.6	9.7	K2	5	..	20896b
11	1969	4.6	-1 54	9.1	9.4	Fo	3	..	24493b	61	2260	4.8	-11 19	10.2	10.3	A2	1	..	20896b
12	2246	4.6	-8 27	10.2	10.5	Fo	2	..	21394b	62	2261	4.8	-11 42	9.2	9.3	A3	3	..	20896b
13	2257	4.6	-11 29	9.2	10.0	G5	1	..	20896b	63	5583	4.8	-26 22	10.8	9.5	F5	1	..	44434b
14	2256	4.6	-11 55	9.3	10.3	Ko	1	..	20896b	64	3968	4.8	-43 48	9.1	9.1	G5	2	..	39914b
15	2359	4.6	-17 15	10.2	10.2	A	1	..	20857b	65	3799	4.8	-45 15	9.6	9.0	Ao	5	..	18300b
16	2405	4.6	-20 13	7.48	8.3	Go	3	..	11036b	66	3818	4.8	-46 47	9.1	9.6	Ko	3	..	18300b
17	6520	4.6	-24 26	9.8	9.2	Ao	3	..	44429b	67	3500	4.8	-48 22	10.5	9.5	Ao	4	..	18300b
18	5579	4.6	-26 57	9.8	9.3	A2	2	..	40080b	68	1512	4.8	-54 38	9.0	8.9	Ao	4	..	24598b
19	5706	4.6	-30 39	9.1	8.9	Ao	4	..	40080b	69	309	4.9	+76 31	8.4	9.0	Go	5	..	38187i
20	3813	4.6	-46 58	8.4	7.0	B8	4	..	8952b	70	1711	4.9	+49 15	7.08	8.08	Ko	6	..	37704i
21	3497	4.6	-48 59	7.8	9.2	Mb	4	..	24598b	71	1545	4.9	+47 14	7.69	7.75	A2	6	..	37704i
22	1538	4.6	-53 23	9.1	9.0	Ao	6	..	24598b	72	1550	4.9	+45 29	7.8	8.8	Ko	5	..	37704i
23	529	4.7	+67 42	8.6	9.6	Ko	2	..	37713i	73	1892	4.9	+9 28	6.88	7.66	G5	6	..	37553i
24	1548	4.7	+45 43	7.8	8.8	Ko	2	..	37704i	74	1893	4.9	+5 33	8.4	8.4	Ao	2	..	37553i
25	1549	4.7	+45 36	7.8	9.0	K5	2	..	37704i	75	1922	4.9	+4 19	9.1	9.5	F5	1	..	38271i
26	1774	4.7	+43 33	8.9	9.7	G5	1	..	37704i	76	2207	4.9	+0 25	9.1	9.5	F5	2	..	24493b
27	2065	4.7	+39 2	6.47	7.03	Go	7	..	37448i	77	2463	4.9	-2 39	9.2	9.3	A2	4	..	24493b
28	1970	4.7	-1 38	10.1	10.1	Ao	1	..	24493b	78	2239	4.9	-4 19	9.3	9.3	Ao	3	..	21394b
29	2460	4.7	-2 26	9.5	9.9	F5	1	..	24493b	79	2397	4.9	-9 43	8.7	9.0	F2	4	..	20896b
30	2461	4.7	-2 41	9.3	10.5	K5	1	..	24493b	80	2280	4.9	-15 57	5.54	5.37	B3	..	0,9-	56,85
31	2381	4.7	-5 50	8.1	9.3	K5	5	..	21394b	81	2409	4.9	-21 0	9.9	9.8	A2	2	..	46182b
32	2395	4.7	-9 25	9.7	9.8	A2	1	..	20896b	82	2293	4.9	-21 17	7.52	8.4	G5	6	5,2	44429b
33	2258	4.7	-11 47	9.7	10.3	Go	1	..	20896b	83	2292	4.9	-21 27	9.7	9.6	Ao	1	..	44429b
34	2410	4.7	-13 45	9.2	10.0	G5	1	..	20896b	84	5640	4.9	-25 56	8.0	8.9	K2	3	..	44429b
35	2278	4.7	-15 17	7.20	7.15	B8	8	..	20857b	85	5589	4.9	-26 26	10.3	9.7	Ao	1	..	44434b
36	2319	4.7	-17 4	8.7	9.8	K2	2	..	20857b	86	5077	4.9	-27 8	11.0	9.3	A2	2	..	40080b
37	2166	4.7	-22 37	10.2	9.5	B9	2	..	44429b	87	5525	4.9	-28 56	9.8	9.2	F5	2	..	40080b
38	2167	4.7	-22 54	9.3	10.1	Ko	2	5,1	46182b	88	4288	4.9	-37 23	6.36	6.8	B5	6	3,8	42221b
39	5709	4.7	-30 18	10.3	9.2	Ao	2	..	40080b	89	3793	4.9	-41 44	8.9	8.9	B9	3	..	39914b
40	4231	4.7	-36 30	8.0	8.6	Ao	3	..	8897b	90	4078	4.9	-44 46	8.9	7.9	B9	7	..	18300b
41	4108	4.7	-38 36	8.0	8.9	F8	4	..	13054b	91	4079	4.9	-45 2	10.5	9.9	Ao	2	..	18300b
42	3967	4.7	-43 21	8.9	9.3	K5	2	..	39914b	92	3169	4.9	-50 10	10.0	9.8	A2	3	R	24598b
43	4073	4.7	-44 34	8.9	9.3	Ko	4	..	18300b	93	819	4.9	-64 5	7.0	8.3	F5	4	..	8913b
44	3796	4.7	-45 55	10.5	9.1	A2	4	..	18300b	94	1775	5.0	+43 14	9.7	10.3	Go	1	..	37704i
45	3815	4.7	-46 31	10.5	10.3	Ko	1	..	18300b	95	1901	5.0	+23 2	8.2	9.2	Ko	3	..	37605i
46	3610	4.7	-47 51	9.4	10.2	K5	2	..	18300b	96	1923	5.0	-0 42	9.1	9.1	Ao	3	..	24493b
47	3498	4.7	-48 43	6.66	7.2	B9	..	0,8	56,125	97	2386	5.0	-5 19	9.0	10.0	Ko	3	..	21394b
48	3167	4.7	-50 49	7.9	8.4	G5	8	..	24598b	98	2387	5.0	-6 0	9.3	10.3	Ko	1	..	21394b
49	963	4.7	-61 14	8.5	9.0	F2	3	..	40088b	99	2250	5.0	-8 55	9.5	9.6	A3	3	..	21394b
50	761	4.8	+63 23	8.0	8.6	Go	3	..	37676i	100	2398	5.0	-9 10	9.7	9.8	A5	3	..	21394b



## THE HENRY DRAPER CATALOGUE.

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8<sup>h</sup> 5<sup>m</sup>.0

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	2360	5.0	-12 36	8.8	8.9	A2	3	..	20896b	51	3807	5.2	-45 30	9.6	8.5	B8	8	..	18300b
2	5080	5.0	-27 54	9.8	9.2	A0	1	..	40080b	52	3624	5.2	-47 26	8.4	7.8	A2	6	..	18300b
3	4239	5.0	-36 8	9.3	9.5	F5	1	..	13054b	53	1516	5.2	-54 8	9.2	10.4	K5	3	..	24598b
4	4110	5.0	-38 51	10.3	9.8	G5	1	..	13054b	54	1517	5.2	-54 32	8.0	8.0	B5	8	..	24598b
5	4026	5.0	-39 12	6.82	7.8	A0	6	..	8897b	55	1515	5.2	-54 46	8.3	8.6	F8	8	..	24598b
6	3889	5.0	-41 0	8.9	8.9	B9	6	..	18289b	56	1514	5.2	-55 2	8.80	9.2	A0	7	..	24598b
7	4082	5.0	-44 37	9.0	8.4	G5	5	..	18300b	57	1054	5.2	-58 54	10.1	10.1	A0	1	..	40088b
8	3170	5.0	-50 41	11.5	10.1	A	1	..	24598b	58	1651	5.3	+16 39	8.2	9.2	K0	3	..	37605i
9	1539	5.0	-53 12	9.0	8.9	B9	6	..	24598b	59	1775	5.3	+14 56	6.14	6.14	A0	9	..	37605i
10	820	5.0	-64 46	8.6	8.7	A2	5	..	15274b	60	1742	5.3	+10 32	8.4	9.5	K2	2	..	20710b
11	1275	5.1	+55 56	8.0	8.3	F0	4	..	37676i	61	2211	5.3	+0 38	8.8	9.3	F8	2	..	24493b
12	1843	5.1	+14 20	9.1	9.9	G5	1	..	38960i	62	2465	5.3	-2 58	8.8	8.9	A2	3	..	38207i
13	2388	5.1	-5 12	9.5	9.5	A0	4	..	21394b	63	2390	5.3	-5 14	9.3	9.4	A5	4	..	21394b
14	2413	5.1	-13 28	9.2	9.3	A5	1	..	20896b	64	2389	5.3	-5 33	9.2	10.4	K5	2	..	21394b
15	2395	5.1	-14 45	9.7	9.7	A0	2	..	20857b	65	2399	5.3	-9 13	9.9	11.3	Ma	1	..	21394b
16	2362	5.1	-18 6	9.3	10.3	K	1	..	20857b	66	2400	5.3	-9 18	9.7	9.7	A0	4	..	21394b
17	2294	5.1	-21 24	9.3	9.2	A2	3	..	44429b	67	..	5.3	-10 59	..	..	A2	1	..	20896b
18	6873	5.1	-23 8	9.6	9.8	K5	1	..	44429b	68	2264	5.3	-11 57	9.1	9.1	B9	4	..	20896b
19	5622	5.1	-29 22	10.5	9.5	B8	2	..	40080b	69	2271	5.3	-19 52	9.5	8.9	A	3	..	20857b
20	5619	5.1	-29 34	7.8	8.9	G5	5	..	40080b	70	2272	5.3	-19 58	9.5	8.9	A0	3	..	20857b
21	5620	5.1	-30 1	6.66	8.6	K5	3	3,7	43040b	71	2410	5.3	-20 56	9.7	9.8	Go	1	..	46182b
22	5585	5.1	-31 14	10.8	9.2	A	3	..	40080b	72	6878	5.3	-23 21	10.8	9.8	Go	2	..	46182b
23	5583	5.1	-31 16	9.8	9.5	A	3	..	40080b	73	6877	5.3	-23 44	11.3	9.8	A0	2	2,2	44434b
24	4905	5.1	-32 57	7.8	8.0	B5	6	3,6	12788b	74	5649	5.3	-25 38	9.8	9.2	A2	1	..	44429b
25	3796	5.1	-41 37	8.9	8.9	A0	3	..	39914b	75	5652	5.3	-26 3	10.1	9.3	A0	2	..	44434b
26	3922	5.1	-42 39	10.9	10.1	B9	1	..	18289b	76	5728	5.3	-30 51	11.0	9.8	A0	1	..	40080b
27	3821	5.1	-46 58	9.8	8.7	A0	4	..	18300b	77	4256	5.3	-35 9	6.20	7.2	G5	..	0,8-	56,125
28	2849	5.1	-51 17	9.6	10.1	Go	2	..	24598b	78	3800	5.3	-41 45	8.6	8.4	B5	3	..	39914b
29	1541	5.1	-53 46	7.6	8.0	K0	8	..	24598b	79	3801	5.3	-41 53	8.9	8.4	A0	3	..	39914b
30	1526	5.1	-56 21	7.2	8.9	K5	4	..	40088b	80	3928	5.3	-42 19	10.9	10.1	B8	2	..	18289b
31	1527	5.1	-56 56	9.7	9.8	A2	1	..	40088b	81	3978	5.3	-44 3	8.6	7.8	B9	4	..	39914b
32	1053	5.1	-58 11	9.3	10.1	G5	1	..	40088b	82	4089	5.3	-44 50	10.9	9.3	B9	3	..	18300b
33	870	5.1	-65 47	8.8	9.6	G5	1	..	15274b	83	3825	5.3	-46 19	10.2	9.6	F0	3	..	18300b
34	235	5.2	+82 44	6.17	6.17	A0	..	0, R	2315c	84	3826	5.3	-46 33	9.8	10.2	G5	2	..	18300b
35	1517	5.2	+50 18	7.62	8.12	F8	5	..	38188i	85	3827	5.3	-46 52	9.0	8.4	A0	5	..	18300b
36	1753	5.2	+31 36	8.1	9.1	K0	3	..	38218i	86	3625	5.3	-47 34	9.6	8.7	A0	4	..	18300b
37	1911	5.2	+3 18	8.6	8.7	A2	3	..	38271i	87	3503	5.3	-48 24	10.2	9.5	F2	4	..	18300b
38	1892	5.2	+2 13	8.8	8.9	A2	4	..	38271i	88	2850	5.3	-51 22	9.0	9.2	F0	5	..	24598b
39	2489	5.2	-6 27	7.68	9.03	Ma	4	..	21394b	89	2851	5.3	-51 26	9.1	9.0	A0	6	..	24598b
40	2404	5.2	-10 51	9.5	10.5	K	1	..	20896b	90	892	5.3	-63 13	7.1	8.1	K0	3	..	8913b
41	2284	5.2	-15 44	9.1	10.1	K0	1	..	20857b	91	1276	5.4	+56 50	6.75	7.09	F2	8	..	37676i
42	2323	5.2	-16 40	9.2	9.3	A2	3	..	20857b	92	1923	5.4	+4 7	8.4	8.7	F0	2	..	38271i
43	2363	5.2	-17 26	9.2	9.8	Go	2	..	20857b	93	1926	5.4	-0 56	9.1	9.1	A0	2	..	24493b
44	2270	5.2	-19 11	9.7	9.6	A5	2	..	20857b	94	2232	5.4	-3 19	8.8	9.6	G5	2	..	38207i
45	2269	5.2	-19 56	8.8	8.4	A5	7	..	20857b	95	2391	5.4	-5 26	9.2	9.2	A0	7	..	21394b
46	5625	5.2	-30 1	11.3	9.5	A3	2	..	40080b	96	2398	5.4	-14 19	8.4	9.4	K0	2	..	20857b
47	5592	5.2	-31 21	7.34	8.3	G5	7	..	40080b	97	2367	5.4	-18 1	8.8	8.8	B9	3	..	20857b
48	3892	5.2	-40 56	8.3	9.2	K0	5	..	18289b	98	2273	5.4	-19 22	9.2	9.2	A0	3	..	20857b
49	3977	5.2	-43 58	9.2	9.0	B9	2	..	39914b	99	2411	5.4	-20 31	9.2	9.8	K2	2	..	20857b
50	4087	5.2	-45 2	10.9	9.6	F0	3	..	18300b	100	2297	5.4	-21 29	9.1	9.5	K0	2	..	44429b



## ANNALS OF HARVARD COLLEGE OBSERVATORY.

68000

8h 5m.4

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	2171	5.4	-22 18	9.3	9.2	Ao	3	..	44429b	51	4043	5.6	-39 59	9.90	10.1	Fo	3	..	18289b
2	6545	5.4	-24 19	8.0	8.0	A3	4	3,2	11036b	52	3934	5.6	-42 29	9.8	9.2	B9	4	..	18289b
3	5085	5.4	-27 10	7.8	8.6	Ko	4	..	40080b	53	3813	5.6	-45 31	9.1	10.3	Ko	1	..	18300b
4	5549	5.4	-28 51	10.5	9.5	A2	1	..	40080b	54	3633	5.6	-47 57	10.2	10.6	K5	1	..	18300b
5	4040	5.4	-39 13	7.14	8.3	Ko	5	..	13054b	55	3368	5.6	-49 52	9.6	10.1	K2	2	..	24598b
6	4093	5.4	-44 8	9.2	7.9	B8	4	..	39914b	56	1462	5.6	-55 11	9.0	10.1	K2	2	..	24598b
7	3809	5.4	-45 58	9.1	8.5	B9	8	..	18300b	57	983	5.6	-60 3	7.96	7.8	Ao	3	..	8913b
8	3628	5.4	-47 18	8.8	7.6	Ao	5	..	39914b	58	965	5.6	-61 4	8.9	8.7	Ao	4	..	40088b
9	3627	5.4	-47 23	9.2	8.4	A	4	..	18300b	59	966	5.6	-61 18	8.6	8.5	Ao	4	..	40088b
10	3506	5.4	-48 8	10.9	10.1	Ao	3	..	18300b	60	203	5.6	-83 26	8.39	8.2	A3	6	..	22238b
11	3505	5.4	-48 19	9.8	10.0	Mb	3	..	18300b	61	403	5.7	+73 2	8.6	9.4	G5	3	..	38187i
12	3175	5.4	-50 4	8.44	9.5	K5	5	..	24598b	62	1744	5.7	+9 52	7.92	8.20	Fo	4	5,7	37553i
13	1384	5.4	-52 30	8.9	8.9	B9	5	..	24598b	63	1884	5.7	+6 7	8.6	9.6	Ko	2	..	38271i
14	1546	5.5	+47 28	8.8	8.9	A2	2	..	37704i	64	1897	5.7	+5 44	8.4	9.5	K2	2	..	38271i
15	1368	5.5	+46 18	8.5	8.9	F5	4	..	37704i	65	2417	5.7	-13 8	10.2	10.2	Ao	2	..	20896b
16	1776	5.5	+35 38	8.5	9.6	K2	2	E	37448i	66	2292	5.7	-15 55	9.1	10.3	K5	1	..	20857b
17	1695	5.5	+32 47	6.95	7.51	Go	7	..	37448i	67	2371	5.7	-17 38	8.8	9.8	Ko	2	..	20857b
18	1913	5.5	+3 14	7.07	7.85	G5	5	..	38271i	68	2197	5.7	-18 56	9.7	9.7	Ao	2	..	20857b
19	2370	5.5	-12 52	9.2	10.0	G5	1	..	20896b	69	5747	5.7	-30 14	11.0	9.5	B9	2	..	40080b
20	2288	5.5	-15 25	8.8	9.4	Go	3	..	20857b	70	5746	5.7	-30 56	9.8	9.2	A2	3	..	40080b
21	2172	5.5	-22 32	8.6	9.5	Ma	2	..	44429b	71	4404	5.7	-34 47	9.2	9.0	Ao	2	..	13054b
22	5599	5.5	-26 36	9.4	9.2	F5	3	R	40080b	72	3816	5.7	-45 40	9.2	9.9	K5	2	..	18300b
23	5598	5.5	-26 36	10.3	9.0	Ao	3	..	40080b	73	3510	5.7	-48 30	9.8	9.2	B9	7	..	18300b
24	5597	5.5	-26 50	8.2	8.6	A	5	R	40080b	74	3370	5.7	-49 12	8.2	8.1	B9	8	..	24598b
25	5090	5.5	-27 8	9.4	8.6	B5	4	..	40080b	75	3369	5.7	-49 23	9.1	8.6	B9	6	..	24598b
26	5739	5.5	-30 47	8.4	8.4	Ao	6	..	40080b	76	1532	5.7	-56 31	9.8	9.8	Ao	1	..	40088b
27	4252	5.5	-36 14	10.3	9.2	Ao	2	..	13054b	77	1278	5.8	+56 46	5.90	6.90	Ko	9	..	37676i
28	4253	5.5	-36 53	9.9	9.2	Ao	2	..	13054b	78	1288	5.8	+52 3	8.9	8.9	Ao	3	..	38188i
29	4297	5.5	-37 30	9.0	8.3	B5	3	..	8897b	79	1871	5.8	+25 19	9.5	10.3	G5	2	..	37503i
30	3804	5.5	-40 15	9.9	9.5	B8	4	..	18289b	80	1885	5.8	+6 39	8.6	8.9	F2	2	..	20710b
31	3805	5.5	-41 44	10.6	10.1	B9	2	..	18289b	81	2392	5.8	-5 32	9.1	9.9	G5	2	..	21394b
32	3982	5.5	-43 6	11.5	9.8	G5	1	..	18289b	82	2371	5.8	-7 26	9.0	10.2	K5	2	..	21394b
33	3811	5.5	-45 6	8.44	9.3	Ao	4	..	18300b	83	2404	5.8	-9 19	7.76	9.11	Mb	6	..	21394b
34	3810	5.5	-45 7	8.7	8.7	Ao	5	..	18300b	84	2266	5.8	-11 15	9.2	10.0	G5	2	..	20896b
35	980	5.5	-59 8	7.0	7.4	B9	7	..	40088b	85	2418	5.8	-13 12	9.5	9.9	F5	1	..	20896b
36	1062	5.5	-60 16	10.2	10.2	Ao	2	..	40088b	86	2372	5.8	-17 54	8.2	9.3	K2	2	..	20857b
37	838	5.5	-69 34	7.8	8.8	Ko	7	..	15274b	87	6888	5.8	-23 50	10.5	10.0	Ao	1	..	44434b
38	284	5.5	-78 52	7.5	8.5	Ko	3	0,2	20869b	88	3809	5.8	-41 44	10.6	9.8	A	2	..	18289b
39	1905	5.6	+23 46	8.5	8.5	Ao	3	..	38635i	89	3810	5.8	-41 47	10.3	9.8	G	1	..	18289b
40	1903	5.6	+23 24	9.6	9.6	Ao	2	..	38635i	90	3817	5.8	-45 43	11.5	10.6	Ma	..	R	M
41	1930	5.6	+7 16	8.8	9.8	Ko	2	..	20710b	91	3834	5.8	-46 30	8.8	9.0	G5	4	..	18300b
42	2402	5.6	-9 34	9.3	9.3	Ao	1	..	20896b	92	3833	5.8	-46 52	7.4	6.8	B8	4	3,7	8952b
43	6550	5.6	-24 13	8.2	8.4	A3	3	1,2	11036b	93	2853	5.8	-51 53	10.9	10.1	Ao	2	..	24598b
44	6549	5.6	-24 31	9.6	9.7	Ko	1	..	44429b	94	1533	5.8	-56 19	8.0	8.3	Fo	6	..	40088b
45	5665	5.6	-25 33	8.1	8.0	B5	3	..	43040b	95	126	5.8	-87 14	8.7	9.7	Ko	3	..	22578b
46	5600	5.6	-26 13	9.6	9.3	G5	2	..	44434b	96	1369	5.9	+46 27	8.7	9.5	G5	2	..	37704i
47	5553	5.6	-29 0	9.8	8.9	Ao	4	..	40080b	97	1879	5.9	+38 44	8.8	9.6	G5	1	..	38611i
48	4261	5.6	-35 48	9.5	9.2	B9	2	..	13054b	98	1786	5.9	+71 19	8.2	9.0	G5	3	..	37605i
49	4257	5.6	-36 56	10.6	9.5	Ao	1	..	13054b	99	1746	5.9	+10 7	6.07	6.05	B9	9	..	37553i
50										100	1895	5.9	+9 1	8.4	8.5	A2	4	..	20710b

THE HENRY DRAPER CATALOGUE.

68100

8h 5m.9

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1886	5.9	+ 6 42	8.4	9.6	K <sub>5</sub>	2	..	20710b	51	5622	6.1	- 26 14	8.6	9.0	K <sub>2</sub>	3	..	40080b
2	1898	5.9	+ 5 36	8.4	9.5	K <sub>2</sub>	1	..	38271i	52	5571	6.1	- 28 45	10.3	9.3	A <sub>2</sub>	2	..	40080b
3	2216	5.9	- 0 2	8.83	8.83	A <sub>0</sub>	3	..	38271i	53	5762	6.1	- 30 36	11.0	9.8	A <sub>2</sub>	1	..	40080b
4	1927	5.9	- 0 53	8.4	9.4	K <sub>0</sub>	4	0,1	24493b	54	4270	6.1	- 35 40	7.9	8.9	K <sub>0</sub>	3	..	13054b
5	2242	5.9	- 4 37	8.4	8.5	A <sub>2</sub>	7	..	21394b	55	4048	6.1	- 39 59	9.05	10.1	K <sub>5</sub>	2	..	18289b
6	2241	5.9	- 4 46	9.5	9.6	A <sub>2</sub>	3	..	21394b	56	3940	6.1	- 42 40	10.2	10.1	G <sub>5</sub>	2	..	18289b
7	2329	5.9	- 17 4	9.2	10.0	G <sub>5</sub>	1	..	20857b	57	3842	6.1	- 46 42	8.9	8.4	B <sub>9</sub>	5	..	18300b
8	2416	5.9	- 20 37	9.2	9.2	K <sub>0</sub>	3	..	20857b	58	3641	6.1	- 47 20	9.6	9.0	A <sub>0</sub>	4	..	18300b
9	2173	5.9	- 22 14	6.66	7.7	F <sub>0</sub>	6	0,8	11036b	59	3639	6.1	- 47 23	10.5	9.6	A <sub>3</sub>	2	..	18300b
10	6890	5.9	- 23 12	9.6	9.8	K <sub>2</sub>	1	..	44429b	60	3642	6.1	- 47 33	9.8	9.4	A <sub>0</sub>	4	..	18300b
11	4262	5.9	- 36 32	8.4	9.2	K <sub>0</sub>	3	..	13054b	61	3516	6.1	- 48 23	5.86	5.6	B <sub>8</sub>	..	0,10	56,125
12	3815	5.9	- 41 44	11.0	10.1	A	2	..	18289b	62	2855	6.1	- 51 37	10.9	10.0	A <sub>2</sub>	2	..	24598b
13	3816	5.9	- 41 49	10.3	9.8	F <sub>0</sub>	1	..	18289b	63	1523	6.1	- 54 38	10.1	10.1	A <sub>0</sub>	2	..	24598b
14	3511	5.9	- 48 56	10.5	9.8	A <sub>0</sub>	5	..	18300b	64	983	6.2	+ 62 20	8.4	8.4	B <sub>9</sub>	3	..	37676i
15	3512	5.9	- 48 56	10.5	9.8	A <sub>0</sub>	5	..	18300b	65	2068	6.2	+ 39 46	7.72	8.72	K <sub>0</sub>	4	0,3	38611i
16	3180	5.9	- 50 12	8.44	8.1	B <sub>9</sub>	9	..	24598b	66	1772	6.2	+ 34 46	8.57	9.64	K <sub>2</sub>	2	0,2	38611i
17	1385	5.9	- 52 19	7.06	7.4	F <sub>2</sub>	3	..	8952b	67	1709	6.2	+ 29 2	8.7	9.2	F <sub>8</sub>	2	..	38218i
18	1534	5.9	- 56 49	9.0	10.6	K <sub>2</sub>	1	..	40088b	68	1659	6.2	+ 16 49	7.23	7.79	G <sub>0</sub>	7	..	37605i
19	1712	6.0	+ 49 33	8.9	9.3	F <sub>5</sub>	2	R	38188i	69	1658	6.2	+ 16 25	8.2	9.0	G <sub>5</sub>	2	0,2	37605i
20	1757	6.0	+ 31 8	8.1	9.1	K <sub>0</sub>	2	..	38218i	70	1747	6.2	+ 9 59	8.77	9.84	K <sub>2</sub>	1	..	20710b
21	2016	6.0	+ 20 16	10.3	10.9	G	2	..	37605i	71	1887	6.2	+ 6 19	8.2	9.0	G <sub>5</sub>	2	..	20710b
22	1657	6.0	+ 16 30	7.43	8.43	K <sub>0</sub>	5	..	37605i	72	1928	6.2	+ 4 40	8.40	9.18	G <sub>5</sub>	4	..	38271i
23	1776	6.0	+ 10 59	8.8	8.8	A <sub>0</sub>	2	..	20710b	73	1976	6.2	- 1 16	7.8	7.8	A <sub>0</sub>	6	0,5	12774b
24	1893	6.0	+ 9 49	8.77	8.91	A <sub>5</sub>	3	..	20710b	74	2471	6.2	- 2 40	9.2	10.2	K <sub>0</sub>	3	..	24493b
25	1894	6.0	+ 9 35	8.07	8.85	G <sub>5</sub>	2	..	37553i	75	2239	6.2	- 4 8	8.8	9.4	G <sub>0</sub>	1	..	24493b
26	1974	6.0	- 1 56	10.1	10.1	A	1	..	24493b	76	2377	6.2	- 7 41	9.2	9.2	A <sub>0</sub>	4	..	21394b
27	2393	6.0	- 5 59	10.2	10.3	A <sub>2</sub>	2	..	21394b	77	2254	6.2	- 9 5	9.0	9.8	G <sub>5</sub>	4	..	21394b
28	2375	6.0	- 12 9	9.2	9.6	F <sub>5</sub>	2	..	20896b	78	2409	6.2	- 10 19	9.3	9.4	A <sub>2</sub>	2	..	20896b
29	2328	6.0	- 16 24	9.5	9.5	A <sub>0</sub>	2	..	20857b	79	2278	6.2	- 19 21	9.2	8.9	A <sub>2</sub>	5	..	20857b
30	2276	6.0	- 19 44	8.8	9.2	K <sub>0</sub>	3	..	20857b	80	2304	6.2	- 21 40	9.3	9.5	F <sub>8</sub>	3	..	44429b
31	5097	6.0	- 27 31	10.8	9.3	A <sub>0</sub>	2	..	40080b	81	5626	6.2	- 26 36	8.8	8.9	K <sub>0</sub>	2	..	40080b
32	5758	6.0	- 30 10	10.5	9.8	B <sub>9</sub>	1	..	40080b	82	5101	6.2	- 27 28	8.8	9.2	K <sub>0</sub>	1	..	40080b
33	5760	6.0	- 30 52	10.3	9.2	A <sub>0</sub>	4	..	40080b	83	4050	6.2	- 39 54	9.5	10.1	A <sub>0</sub>	3	..	18289b
34	3903	6.0	- 40 28	10.6	10.1	A <sub>5</sub>	1	..	18289b	84	3943	6.2	- 42 27	9.0	9.5	K <sub>0</sub>	3	..	18289b
35	3818	6.0	- 41 17	10.8	10.1	B <sub>8</sub>	1	..	18289b	85	4104	6.2	- 44 17	10.2	9.6	A <sub>0</sub>	3	..	18289b
36	3992	6.0	- 43 6	10.9	9.9	A <sub>2</sub>	2	..	18289b	86	3843	6.2	- 46 56	9.6	8.7	A	2	..	18300b
37	3636	6.0	- 47 32	9.0	9.4	K <sub>0</sub>	3	..	18300b	87	3643	6.2	- 47 58	9.4	10.2	Ma	4	0,2	18300b
38	1521	6.0	- 54 18	9.5	10.1	G <sub>0</sub>	2	..	24598b	88	3182	6.2	- 50 13	8.69	8.7	A <sub>0</sub>	6	..	24598b
39	841	6.0	- 69 16	7.7	8.8	K <sub>2</sub>	6	..	15274b	89	2856	6.2	- 51 14	11.5	10.4	A	1	..	24598b
40	1872	6.1	+ 25 29	8.9	9.2	F <sub>0</sub>	4	..	37503i	90	2857	6.2	- 51 44	10.9	10.1	A <sub>3</sub>	2	..	24598b
41	1906	6.1	+ 23 41	9.2	9.5	F	1	..	37503i	91	1387	6.2	- 52 54	9.7	10.0	F <sub>0</sub>	3	..	24598b
42	1777	6.1	+ 11 43	8.6	8.6	A <sub>0</sub>	4	..	20710b	92	541	6.3	+ 66 29	7.02	7.36	F <sub>2</sub>	9	..	37713i
43	2018	6.1	+ 1 33	9.1	9.6	F <sub>8</sub>	5	R	24493b	93	1149	6.3	+ 59 15	8.6	9.6	K <sub>0</sub>	1	..	37409i
44	1975	6.1	- 2 0	10.1	10.2	A <sub>2</sub>	3	..	24493b	94	1621	6.3	+ 48 35	6.75	6.73	B <sub>9</sub>	9	..	37704i
45	2494	6.1	- 6 27	6.64	7.64	K <sub>0</sub>	9	..	21394b	95	1779	6.3	+ 43 19	8.0	8.3	F <sub>2</sub>	4	..	37704i
46	2420	6.1	- 13 30	5.64	6.20	G <sub>0</sub>	..	..	56,85	96	1799	6.3	+ 41 51	8.6	9.0	F <sub>5</sub>	2	..	37704i
47	2277	6.1	- 19 31	9.3	9.5	A <sub>0</sub>	3	..	20857b	97	1859	6.3	+ 13 45	7.5	8.3	G <sub>5</sub>	3	..	38156i
48	2417	6.1	- 20 8	9.7	8.9	A <sub>0</sub>	3	..	20857b	98	1779	6.3	+ 11 29	7.8	7.9	A <sub>2</sub>	7	..	20710b
49	2177	6.1	- 22 33	9.3	9.2	F <sub>5</sub>	4	..	44429b	99	1935	6.3	+ 7 52	8.6	8.7	A <sub>2</sub>	1	..	38271i
50	6569	6.1	- 24 47	10.1	9.2	A <sub>5</sub>	3	..	44429b	100	1889	6.3	+ 6 28	8.0	8.8	G <sub>5</sub>	3	..	37553i

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

68200

8<sup>h</sup> 6<sup>m</sup>.3

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	2472	6.3	- 2 18	8.6	8.9	Fo	5	5,2	24493b	51	1033	6.5	+61 24	8.6	9.2	Go	3	..	37676i
2	2240	6.3	- 3 47	8.6	9.0	F5	3	..	24493b	52	2010	6.5	+40 17	8.3	9.3	Ko	2	..	37704i
3	2409	6.3	- 9 38	9.2	9.3	A2	2	..	20896b	53	1713	6.5	+29 50	8.51	8.57	A2	4	..	38218i
4	2412	6.3	-10 40	9.3	10.3	Ko	1	..	20896b	54	1712	6.5	+29 6	7.9	7.9	Ao	5	..	38218i
5	2267	6.3	-11 38	9.2	10.4	K5	1	..	20896b	55		6.5	+17 57	6.26	6.82				
6	2377	6.3	-17 58	9.2	10.3	K2	1	..	20857b	56	1867	6.5	+17 57	6.02	6.58	Go	..	O, R	56,85
7	2202	6.3	-18 48	10.2	10.2	Ao	1	..	20857b	57		6.5	+17 56	5.56	6.12				
8	2419	6.3	-20 22	8.8	8.4	Fo	5	..	20857b	58	1891	6.5	+ 6 5	8.4	9.8	Ma	2	..	38271i
9	2418	6.3	-21 6	9.5	9.5	A2	3	..	44429b	59	2499	6.5	- 7 7	9.2	9.6	F5	4	..	21394b
10	2305	6.3	-21 34	9.3	9.2	F8	4	..	44429b	60	2383	6.5	-12 38	9.2	9.3	A2	2	..	20896b
11	5629	6.3	-26 51	11.3	9.3	Ao	2	..	40080b	61	2378	6.5	-18 4	8.0	8.8	G5	6	..	20857b
12	5576	6.3	-29 3	11.0	9.5	A2	2	..	40080b	62	2420	6.5	-20 58	10.4	9.8	F8	1	..	46182b
13	5663	6.3	-29 44	8.0	8.4	Ao	3	1,7	43040b	63	5581	6.5	-28 18	10.3	9.2	A3	2	..	40080b
14	4928	6.3	-32 26	8.1	8.6	Fo	4	..	40080b	64	5582	6.5	-28 28	9.8	9.3	F5	2	..	40080b
15	4619	6.3	-33 44	8.3	8.3	A3	3	E	13054b	65	5776	6.5	-30 18	10.3	9.2	Ao	3	..	40080b
16	4270	6.3	-36 14	9.3	9.2	B9	3	..	13054b	66	4930	6.5	-32 44	8.3	8.3	B9	4	..	13054b
17	3998	6.3	-43 49	5.16	5.8	B3	..	0,5	28,201	67	4058	6.5	-39 30	8.3	9.5	K5	3	..	18289b
18	3826	6.3	-45 32	10.9	9.6	B9	3	..	18300b	68	4057	6.5	-39 57	9.05	8.9	B9	6	..	18289b
19	1389	6.3	-52 35	8.9	8.9	B8	5	..	24598b	69	3945	6.5	-42 10	9.1	8.9	B9	2	..	39914b
20	1524	6.3	-55 2	9.56	10.4	Ko	1	..	24598b	70	4000	6.5	-43 14	7.3	7.4	Ko	3	2,4	8897b
21	731	6.3	-68 19	8.5	8.5	Ao	2	..	8913b	71	4001	6.5	-43 25	8.3	7.8	B8	4	1,3	39914b
22	1547	6.4	+47 33	9.2	10.6	Mc	..	..	M	72	4109	6.5	-45 3	9.40	9.1	Fo	4	..	18300b
23	1660	6.4	+30 46	8.9	9.5	G	1	..	38218i	73	3847	6.5	-47 3	2.22	..	Oap	..	R	28,201
24	1860	6.4	+13 41	9.1	10.2	K2	1	..	38960i	74	3522	6.5	-48 54	9.4	8.7	B9	7	..	18300b
25	1748	6.4	+10 46	9.5	9.5	Ao	2	..	20710b	75	3525	6.5	-49 4	10.9	9.8	A2	4	..	18300b
26	1916	6.4	+ 3 25	8.8	8.8	A	1	..	38271i	76	3184	6.5	-50 43	7.38	8.1	Ao	4	..	8952b
27	1928	6.4	- 0 55	9.1	9.2	A2	5	2,2	24493b	77	2859	6.5	-51 5	10.2	10.1	B8	2	..	24598b
28	2243	6.4	- 4 45	9.3	9.9	Go	2	..	21394b	78	1465	6.5	-55 8	8.76	9.0	F2	7	..	24598b
29	2498	6.4	- 6 55	8.0	8.4	F5	7	..	21394b	79	1068	6.5	-60 47	7.9	7.7	Ko	6	..	13025b
30	2256	6.4	- 8 21	9.1	9.4	F2	7	..	21394b	80	232	6.5	-82 18	9.5	9.6	A2	2	..	20869b
31	2410	6.4	- 9 44	8.6	8.9	Fo	5	..	20896b	81	353	6.6	+74 4	8.2	9.2	Ko	4	..	38187i
32	2413	6.4	-10 59	9.3	10.7	Ma	2	..	21394b	82	1742	6.6	+26 33	8.7	9.0	Fo	4	2,3	37503i
33	2268	6.4	-11 28	8.4	8.4	B8	7	..	20896b	83	1873	6.6	+25 8	10.8	11.2	F5	2	..	38635i
34	2297	6.4	-15 38	9.2	9.3	A3	2	..	20857b	84	1932	6.6	+ 4 34	7.8	8.3	F8	4	..	38271i
35	2178	6.4	-23 6	9.3	10.1	K2	1	..	44434b	85	2023	6.6	+ 0 54	8.39	9.57	K5	1	0,1	38271i
36	6911	6.4	-23 55	10.3	9.8	Ao	2	2,2	44434b	86	2022	6.6	+ 0 53	8.79	9.79	K	1	..	24493b
37	5665	6.4	-29 9	9.8	8.9	A3	3	..	40080b	87	2395	6.6	- 5 44	7.78	8.34	Go	8	..	21394b
38	5664	6.4	-29 56	8.54	8.7	F5	5	..	40080b	88	2258	6.6	- 8 39	9.5	9.6	A2	3	..	21394b
39	4430	6.4	-34 42	9.3	9.5	A2	1	..	13054b	89	2257	6.6	- 8 48	9.7	10.5	G5	2	..	21394b
40	3908	6.4	-40 47	10.6	9.8	Fo	2	..	18289b	90	2385	6.6	-12 37	4.68	5.68	Ko	..	..	56,85
41	3910	6.4	-40 59	7.9	9.2	K5	5	..	18289b	91	2334	6.6	-16 18	8.7	9.7	Ko	1	..	20857b
42	3944	6.4	-42 20	6.40	6.7	Ao	3	2,9	8888b	92	2206	6.6	-18 41	7.5	7.5	B9	7	..	11036b
43	3846	6.4	-47 3	4.79	4.62	B3	..	..	28,201	93	2179	6.6	-22 36	8.8	8.9	F5	3	..	44429b
44	3521	6.4	-48 53	9.1	8.6	Ao	7	..	18300b	94	5111	6.6	-27 34	9.6	8.6	Ao	4	..	40080b
45	3375	6.4	-49 41	10.5	9.5	Ao	3	..	24598b	95	5779	6.6	-30 36	9.1	8.6	Ao	6	..	40080b
46	3376	6.4	-49 57	11.5	10.1	A3	2	..	24598b	96	4284	6.6	-35 18	9.9	8.3	B9	2	..	13054b
47	3183	6.4	-50 14	8.6	9.5	Ko	3	..	24598b	97	4282	6.6	-35 28	9.3	8.7	Ao	3	..	13054b
48	1390	6.4	-52 42	9.0	10.1	K2	2	..	24598b	98	4283	6.6	-35 56	7.9	9.0	K5	3	..	13054b
49	1067	6.4	-60 12	9.3	10.3	Ko	1	..	40088b	99	4278	6.6	-36 18	9.9	9.5	A3	2	..	13054b
50	970	6.4	-61 15	9.1	9.5	Fo	3	..	40088b	100	4279	6.6	-36 53	8.3	8.1	B5	3	..	8897b

THE HENRY DRAPER CATALOGUE.

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8<sup>h</sup> 6<sup>m</sup> 6

JOHN G. WOLBACH LIBRARY,  
HARVARD COLLEGE OBSERVATORY,  
CAMBRIDGE, MASS. 02138

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	4316	6.6	-37 52	8.3	8.3	Ko	3	..	8897b	51	1664	6.9	+29 57	5.59	5.59	Aop	..	0,9 R	56,85
2	3915	6.6	-40 52	8.4	8.7	Ao	4	0,8	8897b	52	1880	6.9	+22 41	9.5	9.6	A2	2	..	38635i
3	3828	6.6	-41 57	9.5	10.4	K5	1	..	18289b	53	2219	6.9	+0 42	8.49	8.55	A2	4	..	38271i
4	3831	6.6	-45 20	10.5	9.9	Fo	2	..	18300b	54	2475	6.9	-2 36	9.2	9.8	Go	2	..	24493b
5	3528	6.6	-48 54	9.4	8.7	Ao	6	..	18300b	55	2476	6.9	-3 4	9.0	9.1	A2	1	..	38207i
6	1062	6.6	-58 56	9.5	9.6	A2	2	..	40088b	56	2502	6.9	-6 21	9.7	10.1	F5	2	..	21394b
7	876	6.6	-65 41	8.1	9.2	K2	6	..	15274b	57	2503	6.9	-6 59	9.2	9.7	F8	3	..	21394b
8	1763	6.7	+36 1	8.6	9.2	Go	2	..	38611i	58	2379	6.9	-7 22	9.2	9.5	Fo	4	..	21394b
9	1661	6.7	+30 44	8.6	8.7	A5	3	..	38218i	59	2273	6.9	-12 3	8.6	9.2	Go	4	..	20896b
10	2245	6.7	-3 30	9.0	9.3	F2	3	..	24493b	60	2404	6.9	-14 9	8.2	9.2	Ko	6	..	20857b
11	2245	6.7	-5 1	9.5	9.6	A2	4	..	21394b	61	2425	6.9	-20 55	9.9	9.5	A3	2	..	46182b
12	2378	6.7	-7 28	5.36	6.14	G5	4	..	2346b	62	5696	6.9	-25 56	9.8	9.7	G5	1	..	44434b
13	2426	6.7	-14 4	8.0	9.0	Ko	4	..	20857b	63	4941	6.9	-32 5	7.26	8.6	K2	7	..	40080b
14	2299	6.7	-15 59	9.5	9.5	A	1	..	20857b	64	4939	6.9	-32 18	9.2	8.1	Ao	6	..	40080b
15	2300	6.7	-16 1	8.8	9.6	G5	1	..	20857b	65	4438	6.9	-34 41	8.6	9.2	B9	3	..	13054b
16	5640	6.7	-26 57	10.5	9.5	Ko	1	..	40080b	66	3922	6.9	-40 22	10.6	10.1	Ao	1	..	18289b
17	5588	6.7	-28 12	8.4	9.3	K2	1	..	40080b	67	3921	6.9	-40 43	10.8	10.4	Ko	1	..	18289b
18	5673	6.7	-29 12	10.1	8.9	Ao	2	..	40080b	68	4005	6.9	-43 45	9.6	9.6	B9	2	..	39914b
19	5674	6.7	-29 51	8.13	8.0	B5	3	3,7	43040b	69	4116	6.9	-44 36	10.0	9.4	Ao	2	..	18289b
20	3918	6.7	-40 43	9.5	9.5	Ao	3	..	18289b	70	1395	6.9	-52 4	9.9	10.0	A5	3	..	24598b
21	3948	6.7	-42 22	10.9	10.4	F2	1	..	18289b	71	1396	6.9	-52 16	7.0	6.9	B5	4	..	8952b
22	4002	6.7	-44 2	8.9	7.8	B8	4	..	39914b	72	1072	6.9	-60 20	7.36	7.6	Ao	4	..	8913b
23	4115	6.7	-44 35	9.8	9.6	F8	2	..	18289b	73	650	6.9	-71 31	9.3	9.4	A2	2	..	24527b
24	3653	6.7	-47 38	5.40	5.6	B3	..	2,5	28,201	74	259	6.9	-79 23	8.8	9.8	Ko	2	..	22237b
25	3383	6.7	-49 19	9.4	8.9	Ao	5	..	24598b	75	310	7.0	+76 4	5.73	6.51	G5	10	..	38187i
26	3382	6.7	-49 55	9.2	8.9	Ao	7	..	24598b	76	1117	7.0	+60 19	8.4	9.2	G5	4	..	37676i
27	2860	6.7	-51 42	9.4	10.7	K5	1	..	24598b	77	1800	7.0	+41 1	8.2	8.6	F5	3	..	37704i
28	1526	6.7	-54 4	10.1	10.4	Fo	3	..	24598b	78	1839	7.0	+37 30	8.9	9.9	Ko	1	..	38611i
29	986	6.7	-59 50	9.0	9.5	Fo	4	..	40088b	79	1780	7.0	+14 52	8.44	8.58	A5	2	..	38960i
30	1071	6.7	-60 30	9.5	9.5	Ao	2	..	13025b	80	1897	7.0	+2 35	8.0	8.4	F5	6	..	38271i
31	1869	6.8	+18 48	8.9	10.0	K2	1	..	38960i	81	2381	7.0	-7 49	9.2	10.2	Ko	2	..	21394b
32	1850	6.8	+14 19	6.40	6.54	A5	8	..	38156i	82	2419	7.0	-11 3	9.0	10.2	K5	2	..	21394b
33	1931	6.8	-0 29	9.1	9.2	A2	3	..	24493b	83	2274	7.0	-11 27	9.3	9.8	F8	1	..	20896b
34	2396	6.8	-5 8	9.00	9.06	A2	5	..	21394b	84	2304	7.0	-15 50	9.2	9.8	Go	1	..	20857b
35	2397	6.8	-5 15	9.3	9.9	Go	5	..	21394b	85	5649	7.0	-26 35	9.1	10.0	K5	1	..	40080b
36	2259	6.8	-9 4	8.4	9.5	K2	6	..	21394b	86	5651	7.0	-26 58	10.1	9.5	Ao	1	..	40080b
37	2337	6.8	-16 44	9.2	9.3	A3	1	..	20857b	87	5679	7.0	-29 22	9.3	8.9	Ao	3	..	40080b
38	5694	6.8	-25 50	10.5	9.7	Ao	1	..	44434b	88	5641	7.0	-31 56	10.8	9.2	A2	2	..	40080b
39	5641	6.8	-26 44	9.8	8.6	B9	4	..	40080b	89	4442	7.0	-34 37	8.3	8.6	A3	3	..	13054b
40	4937	6.8	-32 44	9.0	8.9	B9	1	..	12788b	90	4284	7.0	-36 28	9.2	9.0	B9	4	..	13054b
41	R	6.8	-35 27	9.6	9.6	A	1	..	13054b	91	4064	7.0	-39 22	7.9	7.7	F5	5	0,7	13054b
42	3949	6.8	-42 6	10.5	10.1	F2	2	..	18289b	92	3926	7.0	-40 30	10.3	10.1	G5	1	..	18289b
43	3836	6.8	-45 15	11.5	10.2	F2	2	..	18300b	93	3953	7.0	-42 22	8.8	9.8	Ko	3	..	18289b
44	3856	6.8	-46 37	9.6	9.6	F2	3	..	18300b	94	3842	7.0	-45 29	11.5	9.9	B8	2	..	18300b
45	3532	6.8	-48 23	10.2	9.2	B9	7	1,4	18300b	95	3657	7.0	-47 31	8.6	8.1	B5	3	..	8952b
46	2861	6.8	-51 32	6.9	7.2	Go	6	..	8952b	96	3544	7.0	-48 50	9.4	9.0	Ao	6	..	18300b
47	1063	6.8	-58 19	8.4	8.9	Ao	4	..	40088b	97	3545	7.0	-48 58	8.9	8.0	B9	7	..	18300b
48	973	6.8	-61 18	8.7	9.3	Ao	3	..	40088b	98	3543	7.0	-49 2	9.6	8.4	B9	6	..	18300b
49	1150	6.9	+59 22	9.0	9.4	F5	1	..	37409i	99	3385	7.0	-49 43	9.6	9.3	Ao	5	..	24598b
50	1777	6.9	+34 55	8.87	8.87	Ao	3	E	37448i	100	1547	7.0	-53 14	9.1	9.2	G5	6	..	24598b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

68400

8<sup>h</sup> 7<sup>m</sup>.0

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	825	m. 7.0	° -64 31	8.7	9.9	K5	1	..	15274b	51	3552	m. 7.3	° -48 44	8.2	7.4	B3	..	0,4	56,125
2	486	7.0	-74 7	9.0	10.0	Ko	2	..	22237b	52	3554	7.3	-48 45	10.2	9.0	B9	5	..	18300b
3	769	7.1	+62 59	9.2	9.2	A	2	..	37676i	53	3389	7.3	-49 43	8.9	9.8	K2	3	..	24598b
4	1151	7.1	+59 29	8.9	9.5	Go	1	..	37409i	54	1397	7.3	-52 57	8.6	9.3	G5	5	..	24598b
5	1921	7.1	+ 3 23	8.6	9.0	F5	2	..	38271i	55	1530	7.3	-54 39	10.1	10.1	B9	3	..	24598b
6	2275	7.1	-11 10	8.5	8.5	B9	7	..	20896b	56	1074	7.3	-60 59	4.80	5.9	F5	..	0, R	28,201
7	2390	7.1	-12 23	9.0	9.0	Ao	4	..	20896b	57	1119	7.4	+60 41	6.36	6.64	Fo	8	..	37676i
8	2339	7.1	-16 46	9.5	9.5	Ao	2	..	20857b	58	1224	7.4	+53 14	8.6	9.2	Go	3	..	38188i
9	2281	7.1	-20 0	8.43	8.9	Ko	4	..	20857b	59	1569	7.4	+28 35	8.5	8.8	F2	1	..	38218i
10	2308	7.1	-21 12	10.2	10.1	A2	1	..	46182b	60	1875	7.4	+18 16	8.8	8.8	Ao	2	..	37605i
11	2182	7.1	-22 52	9.3	9.5	A5	3	3,3 R	44434b	61	1662	7.4	+16 49	6.12	6.90	G5	6	..	37605i
12	6593	7.1	-24 54	9.8	10.0	Ko	1	..	44429b	62	1854	7.4	+14 13	8.5	9.3	G5	2	..	38960i
13	5656	7.1	-26 20	9.6	9.5	A2	2	..	40080b	63	1981	7.4	- 1 29	9.5	9.5	Ao	3	..	24493b
14	5681	7.1	-30 1	9.58	9.2	A5	1	..	40080b	64	2252	7.4	- 3 39	9.2	9.7	F8	2	..	24493b
15	4330	7.1	-37 9	9.2	9.0	B9	3	..	13054b	65	2251	7.4	- 4 59	9.5	10.0	F8	2	..	21394b
16	4333	7.1	-37 58	7.55	7.7	Ao	6	..	8897b	66	2402	7.4	- 5 11	9.9	9.9	Ao	3	..	21394b
17	4118	7.1	-44 19	10.5	9.0	B8	3	..	18289b	67	2263	7.4	- 8 14	7.9	8.0	A2	9	..	21394b
18	3862	7.1	-46 20	10.5	9.8	A3	2	..	18300b	68	2429	7.4	-13 52	8.5	8.3	B2	4	R	20896b
19	3658	7.1	-48 2	8.6	8.1	A2	3	1,8-	8952b	69	2309	7.4	-21 27	8.8	9.2	Ko	3	..	44429b
20	3548	7.1	-48 43	10.2	9.3	Ao	4	..	18300b	70	6602	7.4	-24 25	10.5	9.5	F5	1	..	44434b
21	3388	7.1	-49 33	9.0	9.0	A3	6	..	24598b	71	5696	7.4	-29 43	10.1	9.5	F	1	..	40080b
22	974	7.1	-61 16	8.5	10.4	Ma	1	..	40088b	72	4950	7.4	-32 51	8.3	8.6	A3	3	E	13054b
23	896	7.1	-63 30	6.38	6.1	B8	..	1,8	28,201	73	4302	7.4	-35 30	10.1	8.7	B9	2	..	13054b
24	1549	7.2	+47 6	8.4	9.4	Ko	2	..	37704i	74	4155	7.4	-38 46	7.23	7.2	B9	6	R	8897b
25	1784	7.2	+11 29	7.47	8.65	K5	2	..	20710b	75	3961	7.4	-42 30	9.0	9.2	Ko	1	..	39914b
26	2399	7.2	- 5 48	8.0	9.0	Ko	6	..	21394b	76	3849	7.4	-45 42	9.6	8.2	B9	8	..	18300b
27	2506	7.2	- 6 9	9.2	10.0	G5	1	..	21394b	77	3664	7.4	-47 46	8.9	8.2	B9	8	..	18300b
28	2305	7.2	-15 27	9.3	9.7	F5	1	..	20857b	78	3556	7.4	-48 56	6.68	6.2	B3	..	0,7	56,125
29	5646	7.2	-31 43	9.3	8.9	A2	4	..	40080b	79	1551	7.4	-53 9	10.1	10.1	Ao	3	..	24598b
30	4289	7.2	-36 16	11.3	9.8	A	1	..	13054b	80	1411	7.4	-57 41	8.4	8.7	B9	4	..	40088b
31	4287	7.2	-36 55	8.9	8.6	B9	4	..	13054b	81	674	7.5	+64 1	8.1	8.5	F5	5	3,7	37676i
32	3549	7.2	-48 58	9.0	8.0	B8	7	..	18300b	82	1550	7.5	+47 36	8.2	8.6	F5	4	..	37704i
33	2863	7.2	-51 15	10.0	9.8	Fo	2	..	24598b	83	1752	7.5	+ 9 53	7.57	7.71	A5	8	..	20710b
34	1467	7.2	-55 47	5.80	5.86	A2	..	0,7	56,125	84	2027	7.5	+ 1 9	9.1	9.6	F8	2	..	24493b
35	502	7.3	+70 30	7.36	8.36	Ko	5	..	37713i	85	1982	7.5	- 1 40	9.1	10.1	Ko	1	..	24493b
36	1372	7.3	+45 52	8.7	9.3	Go	2	..	37704i	86	2309	7.5	-15 21	8.7	8.7	Ao	5	..	20857b
37	2074	7.3	+39 19	8.6	9.4	G5	2	..	38611i	87	2310	7.5	-15 22	8.7	8.7	Ao	5	..	20857b
38	1783	7.3	+14 52	8.54	9.04	F8	2	..	37605i	88	6607	7.5	-25 1	10.1	9.5	Ao	1	..	44429b
39	1785	7.3	+11 29	7.16	7.11	B8	6	..	37553i	89	5711	7.5	-25 24	9.6	8.9	Ao	2	..	44429b
40	2401	7.3	- 5 16	10.3	10.4	A2	2	..	21394b	90	5699	7.5	-29 34	10.5	9.8	Fo	1	..	40080b
41	2421	7.3	-10 24	9.2	9.7	F8	1	..	20896b	91	4304	7.5	-35 9	9.3	8.7	Fo	3	..	13054b
42	2276	7.3	-11 34	9.2	10.2	Ko	1	..	20896b	92	3846	7.5	-41 6	9.3	10.1	K2	2	..	18289b
43	2392	7.3	-12 35	9.3	9.6	Fo	1	..	20896b	93	3845	7.5	-41 38	10.1	9.8	B8	3	..	18289b
44	2406	7.3	-14 22	9.2	9.0	B3	5	..	20857b	94	3561	7.5	-48 32	8.4	8.1	A5	7	0,8	24598b
45	2307	7.3	-15 14	9.00	9.50	F8	2	..	20857b	95	3562	7.5	-48 48	9.6	9.3	B9	4	..	18300b
46	2341	7.3	-16 26	8.7	9.7	Ko	1	..	20857b	96	3560	7.5	-48 52	8.3	7.6	B9	8	..	18300b
47	5704	7.3	-25 45	9.6	8.9	A2	3	..	44429b	97	1412	7.5	-57 5	9.4	10.4	Ko	1	..	40088b
48	5663	7.3	-26 17	10.1	9.7	A	1	..	40080b	98	989	7.5	-59 50	8.5	10.1	K2	2	..	40088b
49	4448	7.3	-34 35	8.7	8.7	Ao	3	..	13054b	99	735	7.5	-68 36	7.2	7.3	A2	6	..	8913b
50	4291	7.3	-36 59	6.31	6.5	Bo	7	R	8897b	100	1716	7.6	+49 8	9.2	9.5	Fo	2	..	38188i

## THE HENRY DRAPER CATALOGUE.

68500

8<sup>h</sup> 7<sup>m</sup>.6

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1881	7.6	+38 4	8.5	9.5	Ko	2	..	38611i	51	5710	7.8	-30 1	9.14	9.2	Go	3	..	4008ob
2	1878	7.6	+25 1	9.01	9.09	A3	3	..	37503i	52	5661	7.8	-31 51	9.6	8.9	B	3	..	4008ob
3	2020	7.6	+20 34	8.3	9.1	G5	4	..	37605i	53	4084	7.8	-39 19	4.43	7.2	K5	..	3,9 R	28,202
4	1904	7.6	+5 14	7.17	7.15	B9	6	..	37553i	54	3857	7.8	-45 33	9.0	8.2	B9	8	..	1830ob
5	2382	7.6	-7 53	9.3	10.3	Ko	2	..	21394b	55	3876	7.8	-46 37	10.0	8.7	B8	4	..	1830ob
6	2395	7.6	-12 34	9.3	9.3	Ao	2	..	20896b	56	3670	7.8	-47 24	8.6	8.4	F8	5	..	1830ob
7	2344	7.6	-16 36	9.3	9.4	A2	2	..	20857b	57	3566	7.8	-48 21	9.8	8.7	Ao	6	2,7	24598b
8	2432	7.6	-20 18	9.2	8.9	F8	4	..	20857b	58	3567	7.8	-48 39	10.9	9.5	Ao	4	..	1830ob
9	5671	7.6	-26 48	9.3	8.4	B9	2	..	4304ob	59	3571	7.8	-48 49	10.9	10.1	Fo	2	..	1830ob
10	4300	7.6	-36 30	7.25	8.1	Ko	7	..	13054b	60	2867	7.8	-51 53	9.8	9.5	A2	5	..	24598b
11	4341	7.6	-37 10	8.9	9.2	B8	4	..	13054b	61	847	7.8	-69 36	7.6	7.6	B9	3	..	8913b
12	3938	7.6	-40 27	6.66	8.3	K2	4	0,8	8897b	62	1783	7.9	+43 20	6.68	6.68	Ao	8	..	37704i
13	3854	7.6	-45 13	10.9	9.8	F2	3	..	1830ob	63	1658	7.9	+33 51	7.7	8.7	Ko	2	..	38218i
14	3851	7.6	-45 38	11.5	9.9	Ao	2	..	1830ob	64	1563	7.9	+27 25	8.5	8.5	Ao	4	..	37503i
15	3665	7.6	-47 53	8.5	9.0	G5	6	..	1830ob	65	2409	7.9	-5 59	10.3	10.9	Go	1	..	21394b
16	3393	7.6	-49 14	9.8	9.3	Ao	4	..	24598b	66	2513	7.9	-6 21	9.2	10.2	Ko	2	..	21394b
17	3188	7.6	-50 23	10.9	10.0	A2	2	..	24598b	67	2511	7.9	-6 32	9.2	9.7	F8	2	..	21394b
18	990	7.6	-59 14	6.64	6.8	B9	4	..	42171b	68	2424	7.9	-10 15	8.96	8.96	Ao	3	..	20896b
19	976	7.6	-61 17	8.8	9.5	B9	3	..	40088b	69	5624	7.9	-28 42	8.0	7.8	B5	2	..	4304ob
20	736	7.6	-68 19	4.46	4.34	B5	..	R	28,202	70	5713	7.9	-29 54	7.74	8.3	B8	3	3,7	4304ob
21	1522	7.7	+50 23	9.4	10.4	Ko	1	..	38188i	71	4308	7.9	-36 55	9.3	8.7	B8	2	..	13054b
22	1882	7.7	+38 15	8.6	9.6	Ko	1	..	38611i	72	4352	7.9	-37 4	8.6	8.3	B5	6	..	13054b
23	1753	7.7	+10 44	9.1	9.7	Go	2	..	20710b	73	3967	7.9	-42 14	10.0	9.5	Ao	5	..	18289b
24	1905	7.7	+5 11	8.6	9.6	Ko	1	..	38271i	74	3973	7.9	-43 4	8.2	9.2	K2	2	..	39914b
25	1901	7.7	+2 9	8.8	9.8	Ko	1	..	38271i	75	3858	7.9	-45 33	9.0	9.3	Ko	4	..	1830ob
26	2254	7.7	-3 57	10.2	10.2	A	1	..	21394b	76	3880	7.9	-46 25	9.8	9.3	F5	2	..	1830ob
27	2404	7.7	-5 23	9.7	10.7	Ko	3	..	21394b	77	3674	7.9	-47 11	10.5	9.6	Ao	2	..	1830ob
28	2265	7.7	-8 36	9.7	9.7	Ao	3	..	21394b	78	3572	7.9	-48 33	9.4	8.3	Ao	8	1,8	24598b
29	2419	7.7	-9 8	9.9	10.3	F5	2	..	21394b	79	622	8.0	+64 53	8.6	9.6	Ko	3	..	37713i
30	2422	7.7	-10 32	8.16	9.16	Ko	3	..	20896b	80	1225	8.0	+53 34	8.7	9.7	Ko	2	..	38188i
31	2277	7.7	-11 38	10.6	10.6	A	1	..	20896b	81	1886	8.0	+22 35	8.7	9.1	F5	3	..	37605i
32	2345	7.7	-16 8	9.0	9.4	F5	2	..	20857b	82	1797	8.0	+16 57	8.4	9.5	K2	2	..	37605i
33	2313	7.7	-21 42	8.8	9.2	A2	4	..	44429b	83	1924	8.0	+3 26	8.9	9.7	G5	1	..	38271i
34	6612	7.7	-24 18	9.8	9.0	Ao	3	0,3	44434b	84	2482	8.0	-2 10	8.8	9.2	F5	3	..	24493b
35	5130	7.7	-27 13	7.56	8.3	B3	3	0,7	4304ob	85	2411	8.0	-5 16	9.30	9.30	Ao	4	..	21394b
36	5708	7.7	-29 37	9.6	9.2	A3	2	..	4008ob	86	2514	8.0	-6 54	8.2	9.2	Ko	5	..	21394b
37	4308	7.7	-35 7	8.65	9.2	Ao	2	..	13054b	87	2433	8.0	-13 10	8.0	8.0	Ao	6	..	20896b
38	4304	7.7	-36 20	10.3	9.2	A2	2	..	13054b	88	2417	8.0	-14 58	8.91	8.89	B9	6	..	20857b
39	4015	7.7	-44 1	9.6	9.1	A2	3	..	39914b	89	2315	8.0	-15 40	9.3	9.3	Ao	2	..	20857b
40	991	7.7	-59 55	8.77	9.8	G5	4	..	40088b	90	2216	8.0	-19 4	9.0	10.2	K5	2	..	20857b
41	1781	7.8	+35 33	8.5	9.6	K2	2	E	37448i	91	2285	8.0	-19 21	9.7	9.6	A2	2	..	20857b
42	1570	7.8	+28 4	7.63	7.97	F2	4	..	38218i	92	2436	8.0	-20 12	9.7	9.2	A2	3	..	20857b
43	1913	7.8	+23 27	6.44	6.50	A2	9	..	37605i	93	6945	8.0	-23 9	10.3	9.8	Ao	2	1,2	46182b
44	1665	7.8	+16 44	8.8	9.1	Fo	2	..	37605i	94	6947	8.0	-23 52	9.0	8.9	Ao	5	0,4	44434b
45	2480	7.8	-2 20	8.6	8.7	A5	2	..	38207i	95	5625	8.0	-28 16	8.8	9.2	Ko	2	..	4008ob
46	2509	7.8	-6 34	9.0	9.8	G5	2	..	21394b	96	4309	8.0	-36 53	9.2	8.9	B9	4	..	13054b
47	2510	7.8	-6 37	9.5	10.1	G	1	..	21394b	97	4087	8.0	-39 5	8.9	9.2	F5	2	..	13054b
48	6940	7.8	-23 23	11.3	10.0	Ao	1	2,1	44434b	98	3944	8.0	-40 18	10.8	9.8	Fo	2	..	18289b
49	5133	7.8	-28 0	10.3	9.2	B9	3	..	4008ob	99	3856	8.0	-41 36	9.7	9.8	Ko	2	..	18289b
50	5619	7.8	-28 52	9.6	9.3	Ko	1	..	4008ob	100	3855	8.0	-42 3	9.9	9.8	B8	3	..	18289b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

68600

8h 8m.0

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	3979	8.0	-42 41	4.87	4.95	A3	..	0,6	28,202	51	4319	8.2	-35 48	9.5	9.2	F5	2	..	13054b
2	3978	8.0	-42 48	9.1	8.4	B8	3	..	39914b	52	4361	8.2	-37 8	10.6	9.2	Ao	1	..	13054b
3	4139	8.0	-44 27	10.2	9.8	F5	2	..	18300b	53	4362	8.2	-37 38	8.6	8.6	Ao	4	..	13054b
4	4136	8.0	-44 52	8.3	8.5	G5	7	..	18300b	54	3861	8.2	-41 6	9.7	9.8	Ko	2	..	18289b
5	3861	8.0	-45 23	10.5	10.2	A3	2	..	18300b	55	3983	8.2	-42 53	10.9	10.1	B8	1	..	18289b
6	3860	8.0	-45 46	9.2	9.0	Ko	4	..	18300b	56	3885	8.2	-46 55	9.4	9.0	Ao	4	..	18300b
7	3863	8.0	-45 59	9.2	9.0	G5	4	..	18300b	57	3576	8.2	-48 9	5.94	5.8	B3	..	0,9	28,202
8	3574	8.0	-48 59	8.2	8.0	B8	8	1,3	24598b	58	1373	8.3	+46 24	8.6	9.4	G5	2	..	37704i
9	3192	8.0	-50 26	9.6	10.5	Ko	1	..	24598b	59	1805	8.3	+41 26	7.6	7.9	F2	5	..	37704i
10	1403	8.0	-52 36	9.2	9.2	B9	5	..	24598b	60	1769	8.3	+36 48	8.3	9.4	K2	3	..	38611i
11	992	8.0	-59 8	9.3	9.3	Ao	4	..	40088b	61	1865	8.3	+13 25	9.8	10.3	F8	1	..	38960i
12	1781	8.1	+34 16	7.62	8.62	K2	3	2,4	38611i	62	1907	8.3	+9 22	9.1	9.2	A5	2	..	20710b
13	1790	8.1	+21 40	9.6	9.6	Ao	2	..	38635i	63	1905	8.3	+8 57	8.9	9.4	F8	3	..	20710b
14	1667	8.1	+15 56	8.4	9.0	Go	3	..	37605i	64	1908	8.3	+5 25	8.6	9.0	F5	3	..	38271i
15	1787	8.1	+11 9	7.30	7.80	F8	9	..	20710b	65	2031	8.3	+1 41	8.2	8.3	A2	6	..	38271i
16	2483	8.1	-2 37	9.2	9.2	A	1	..	38207i	66	2030	8.3	+1 10	8.8	9.6	G5	2	..	38271i
17	2413	8.1	-5 27	9.3	9.4	A2	4	..	21394b	67	1938	8.3	-0 51	6.51	7.51	Ko	7	..	38271i
18	2412	8.1	-5 35	9.9	9.9	Ao	3	..	21394b	68	1988	8.3	-1 8	8.5	9.5	Ko	4	0,2	24493b
19	2278	8.1	-12 2	9.5	9.6	A5	1	..	20896b	69	2419	8.3	-5 20	8.7	8.7	Ao	7	..	21394b
20	5140	8.1	-27 34	10.3	9.2	Ao	2	..	40080b	70	2428	8.3	-10 42	9.3	9.7	F5	2	..	20896b
21	5141	8.1	-27 59	9.4	9.0	F5	3	..	40080b	71	2438	8.3	-13 12	8.2	9.2	Ko	3	..	20896b
22	5626	8.1	-28 55	9.8	9.2	Ko	1	..	40080b	72	2437	8.3	-13 33	8.2	8.2	B8	7	..	20896b
23	4316	8.1	-35 28	6.74	8.1	Mb	..	5,5	56,125	73	2319	8.3	-15 55	9.1	9.2	A5	3	..	20857b
24	4359	8.1	-37 16	8.6	8.6	B8	5	..	13054b	74	2319	8.3	-21 34	9.2	9.6	G5	1	..	44429b
25	3947	8.1	-40 20	10.3	9.5	A2	3	..	18289b	75	5633	8.3	-28 6	8.8	9.3	Ko	1	..	40080b
26	3864	8.1	-45 8	10.0	10.5	K5	1	..	18300b	76	4322	8.3	-35 26	8.3	8.1	G5	4	..	13054b
27	3867	8.1	-45 31	7.4	8.1	G5	9	..	18300b	77	4365	8.3	-37 13	9.3	9.0	B8	1	..	13054b
28	3866	8.1	-45 49	10.2	9.8	Ko	2	..	18300b	78	4164	8.3	-38 39	8.6	8.1	Ao	2	..	8897b
29	3868	8.1	-46 3	10.5	9.6	A2	3	..	18300b	79	3864	8.3	-41 53	9.7	10.4	Ko	1	..	18289b
30	3676	8.1	-47 38	8.9	9.6	K5	4	..	18300b	80	3870	8.3	-46 1	11.5	9.6	Ao	3	..	18300b
31	3577	8.1	-48 42	10.2	9.8	Ao	4	2,2	18300b	81	1405	8.3	-52 29	8.4	9.0	B9	6	..	24598b
32	3194	8.1	-50 10	9.8	9.5	Ao	3	..	24598b	82	406	8.4	+72 33	9.2	9.5	F2	2	..	38187i
33	3193	8.1	-50 53	7.9	8.1	B5	7	..	24598b	83	1152	8.4	+59 32	8.7	9.5	G5	1	..	37676i
34	901	8.1	-64 1	8.6	9.6	Ko	2	..	15274b	84	1908	8.4	+8 58	9.1	9.1	Ao	2	..	20710b
35	828	8.1	-64 28	7.7	8.7	Ko	7	5,8	15274b	85	2420	8.4	-5 16	8.50	8.50	Ao	7	..	21394b
36	653	8.1	-71 51	8.2	9.2	Ko	1	..	24527b	86	2386	8.4	-7 44	10.6	10.6	Ao	2	..	21394b
37	986	8.2	+62 32	9.5	10.1	G	2	..	37676i	87	2403	8.4	-12 25	7.6	7.7	A2	7	..	20896b
38	1128	8.2	+57 24	7.8	8.6	G5	5	..	37676i	88	2323	8.4	-21 20	9.3	8.9	Ao	4	..	44429b
39	1726	8.2	+44 42	8.7	9.3	G	2	..	37704i	89	6955	8.4	-24 1	11.0	9.8	Ao	1	..	44434b
40	1804	8.2	+40 53	7.64	7.70	A2	6	..	37704i	90	6629	8.4	-24 11	9.3	9.7	Ko	2	2,2-	44429b
41	1784	8.2	+35 44	8.9	9.4	F8	2	E	37448i	91	5639	8.4	-28 42	9.6	8.6	A2	3	..	40080b
42	2021	8.2	+19 58	8.45	9.45	Ko	3	..	37605i	92	5678	8.4	-31 8	9.6	9.2	B9	2	..	40080b
43	1755	8.2	+10 11	7.8	8.4	Go	8	..	20710b	93	4368	8.4	-37 21	9.9	9.2	A	5	R	13054b
44	1937	8.2	-0 27	8.4	9.0	Go	2	..	38207i	94	4021	8.4	-43 44	9.4	9.3	G	1	..	39914b
45	2258	8.2	-3 52	9.3	10.1	G5	2	..	21394b	95	4022	8.4	-43 47	10.2	9.6	Ao	1	..	39914b
46	2414	8.2	-5 20	9.2	9.3	A2	4	..	21394b	96	3871	8.4	-45 37	11.5	10.2	Ao	2	..	18300b
47	2420	8.2	-14 17	9.0	9.0	Ao	5	..	20857b	97	3872	8.4	-45 56	8.3	7.8	Ao	9	..	18300b
48	2219	8.2	-19 7	9.9	9.2	A2	2	..	20857b	98	3583	8.4	-48 54	10.9	9.8	A2	3	..	24598b
49	2437	8.2	-20 44	9.1	8.9	Ao	3	..	46182b	99	3399	8.4	-49 44	8.8	10.0	Ma	2	..	24598b
50	2439	8.2	-20 44	9.0	8.6	Ao	4	..	46182b	100	1406	8.4	-52 5	10.1	10.4	Fo	1	..	24598b



## THE HENRY DRAPER CATALOGUE.

68700

8<sup>h</sup> 8<sup>m</sup>.5

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	315	8.5	+76 12	8.4	9.4	Ko	3	..	38187i	51	2427	8.7	- 9 32	9.2	9.2	Ao	2	..	20896b
2	1399	8.5	+51 7	8.7	9.0	Fo	3	..	38188i	52	2324	8.7	-15 29	5.05	5.83	G5	7	0,10	8827b
3	1882	8.5	+17 58	6.43	6.71	Fo	..	0,8	56,85	53	2350	8.7	-16 19	8.8	8.9	A2	3	..	20857b
4	2005	8.5	+ 8 2	7.6	7.6	Ao	6	..	37553i	54	2293	8.7	-19 9	9.0	9.2	K2	4	..	20857b
5	1900	8.5	+ 6 36	7.55	7.55	Ao	6	1,6	38271i	55	6963	8.7	-23 53	9.3	9.5	G5	3	5,2	46182b
6	1904	8.5	+ 2 19	8.0	8.5	F8	6	..	38271i	56	5739	8.7	-26 2	9.8	8.9	B8	3	..	40080b
7	2260	8.5	- 3 46	8.8	9.8	Ko	1	..	21394b	57	5732	8.7	-29 23	10.3	9.5	B9	1	..	40080b
8	2424	8.5	-14 28	8.4	9.5	K2	5	..	20857b	58	5738	8.7	-29 36	6.30	7.7	A2	8	..	43040b
9	2222	8.5	-18 59	9.7	9.7	B9	3	..	20857b	59	5734	8.7	-29 59	9.18	9.5	Ao	3	..	40080b
10	2223	8.5	-19 6	10.2	9.5	F8	2	..	20857b	60	5848	8.7	-30 46	9.6	8.9	Fo	4	..	40080b
11	2188	8.5	-22 43	9.7	9.2	Go	2	5,1	46182b	61	4322	8.7	-36 41	6.66	7.0	Bo	7	..	8897b
12	2187	8.5	-22 44	10.2	9.8	Ao	2	..	46182b	62	4098	8.7	-39 59	9.20	9.5	F2	4	..	18289b
13	5836	8.5	-30 24	9.6	9.2	B9	2	..	40080b	63	4028	8.7	-43 6	6.9	7.2	K2	3	0,5	8897b
14	4370	8.5	-37 13	9.2	8.9	B9	3	..	13054b	64	4150	8.7	-44 9	9.6	9.3	Ko	3	..	18289b
15	3951	8.5	-40 11	8.85	9.5	K5	2	..	18289b	65	3403	8.7	-49 46	7.34	7.2	B9	5	1,10	8952b
16	3867	8.5	-41 29	6.52	8.3	K2	5	2,8	8897b	66	981	8.7	-61 32	8.6	9.5	F5	3	..	40088b
17	4025	8.5	-43 28	9.6	9.6	B9	2	..	18289b	67	743	8.7	-68 41	7.1	7.1	Ao	8	..	8913b
18	4023	8.5	-43 56	9.1	8.2	Ao	3	..	39914b	68	655	8.7	-71 50	8.1	9.1	Ko	3	..	24527b
19	3679	8.5	-47 41	10.5	9.3	Ao	4	..	18300b	69	316	8.8	+76 40	8.2	9.0	G5	4	..	38187i
20	461	8.6	+69 8	8.5	9.6	K2	1	..	37713i	70	623	8.8	+65 7	8.1	8.5	F5	4	..	37713i
21	1524	8.6	+50 4	8.4	9.0	Go	2	..	38188i	71	1154	8.8	+59 30	6.70	7.70	Ko	6	..	37676i
22	1717	8.6	+49 27	9.2	9.8	G	1	..	38188i	72	1375	8.8	+46 16	8.6	9.2	Go	2	..	37704i
23	1789	8.6	+43 18	9.0	9.6	Go	2	..	37704i	73	1700	8.8	+32 8	8.3	8.4	A2	4	..	38218i
24	1566	8.6	+27 1	7.7	8.5	G5	4	..	37503i	74	1568	8.8	+27 25	8.6	9.6	Ko	2	..	38635i
25	1792	8.6	+20 59	6.83	7.17	F2	8	..	37605i	75	1880	8.8	+25 2	8.86	10.21	Mc	..	5,2	M
26	1941	8.6	+ 7 9	8.8	8.9	A2	2	..	38271i	76	1868	8.8	+13 22	6.48	7.48	Ko	5	..	38156i
27	2035	8.6	+ 1 33	8.6	9.7	K2	3	..	38271i	77	2257	8.8	- 4 56	9.3	9.4	A2	5	..	21394b
28	2256	8.6	- 4 48	9.5	9.5	Ao	4	..	21394b	78	2436	8.8	- 5 19	8.7	8.8	A2	5	..	21394b
29	2425	8.6	- 5 46	10.2	10.2	B9	3	..	21394b	79	2432	8.8	- 5 31	9.2	9.2	A	5	..	21394b
30	2517	8.6	- 6 18	7.24	8.24	Ko	7	..	21394b	80	2395	8.8	-17 50	7.8	7.9	A2	3	..	11036b
31	2518	8.6	- 7 8	8.8	9.8	Ko	4	..	21394b	81	2227	8.8	-18 29	9.9	9.9	A	1	..	20857b
32	2431	8.6	-10 40	9.1	9.4	F2	2	..	20896b	82	2228	8.8	-18 43	9.1	9.7	Go	3	..	20857b
33	2289	8.6	-19 9	9.1	9.6	K5	1	..	20857b	83	2443	8.8	-20 56	8.1	9.2	Ko	3	..	44429b
34	4471	8.6	-34 11	8.9	8.9	Ao	2	..	13054b	84	4325	8.8	-36 22	7.5	8.9	K2	3	..	13054b
35	4472	8.6	-34 46	8.9	9.2	Ao	3	..	13054b	85	3959	8.8	-40 12	8.10	8.6	Go	7	..	18289b
36	3053	8.6	-40 19	11.0	10.4	Ao	1	..	18289b	86	3880	8.8	-45 5	10.2	9.3	Ao	4	..	18300b
37	4148	8.6	-44 36	10.0	9.1	B9	4	..	18300b	87	3898	8.8	-46 57	11.5	10.1	Ao	1	..	18300b
38	4147	8.6	-44 52	9.6	9.3	Ko	2	..	18300b	88	407	8.9	+73 45	8.6	9.4	G5	2	..	38187i
39	3895	8.6	-47 3	10.2	9.0	B5	3	..	18300b	89	1213	8.9	+54 24	8.4	8.8	F5	2	..	38188i
40	1407	8.6	-52 36	9.6	10.4	G5	1	..	24598b	90	1552	8.9	+47 52	8.7	9.0	F2	3	..	37704i
41	1540	8.6	-54 37	8.8	9.6	G5	3	..	24598b	91	1664	8.9	+33 50	8.7	9.7	Ko	1	..	38611i
42	1472	8.6	-55 4	9.6	9.6	Ao	3	..	24598b	92	1918	8.9	+23 1	8.8	8.9	A3	2	..	37605i
43	482	8.6	-74 2	9.0	10.0	Ko	1	..	22237b	93	2259	8.9	- 4 21	8.2	8.6	F5	5	..	21394b
44	406	8.7	+73 39	8.6	9.4	G5	3	..	38187i	94	2438	8.9	- 5 24	9.7	9.8	A2	3	..	21394b
45	1292	8.7	+52 40	7.7	8.7	Ko	3	..	38188i	95	2521	8.9	- 6 11	8.6	9.6	Ko	4	..	21394b
46	1525	8.7	+50 13	8.5	9.3	G5	2	..	38188i	96	2429	8.9	- 9 26	9.2	9.7	F8	3	..	21394b
47	1834	8.7	+42 14	9.4	10.0	G	1	..	37704i	97	2327	8.9	-22 6	8.7	8.1	Ao	4	..	44429b
48	2036	8.7	+ 0 56	8.49	9.49	Ko	2	0,2	38207i	98	6971	8.9	-23 12	7.6	7.4	A3	4	0,3	11036b
49	1940	8.7	- 0 57	9.1	10.1	Ko	1	..	24493b	99	6970	8.9	-23 40	8.8	9.8	K5	2	3,2	44434b
50	2428	8.7	- 6 5	9.7	10.5	G5	1	..	21394b	100	6641	8.9	-24 44	10.8	9.7	A2	2	..	46182b



## ANNALS OF HARVARD COLLEGE OBSERVATORY.

68800

8<sup>h</sup> 8<sup>m</sup>.9

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	5743	8.9	-25 26	9.6	8.9	F5	2	..	44429b	51	1757	9.2	+ 9 53	9.5	10.1	Go	1	..	20710b
2	5157	8.9	-27 24	10.5	8.9	A2	3	..	40080b	52	1902	9.2	+ 5 55	8.9	9.9	Ko	1	..	38271i
3	5648	8.9	-28 53	10.1	9.2	Ao	2	..	40080b	53	2444	9.2	- 5 16	9.3	9.7	F5	2	..	21394b
4	3966	8.9	-40 59	10.8	10.1	Ao	1	..	18289b	54	2523	9.2	- 6 33	8.4	9.4	Ko	5	..	21394b
5	4034	8.9	-43 40	9.8	9.0	B8	3	..	18289b	55	2271	9.2	- 8 12	9.9	9.9	Ao	2	..	21394b
6	3881	8.9	-45 41	8.0	8.1	G5	7	..	18300b	56	2435	9.2	- 9 44	8.0	8.0	B9	7	..	20896b
7	3882	8.9	-45 54	9.6	8.7	Ao	6	..	18300b	57	2434	9.2	-10 0	8.71	8.85	A5	4	R	20896b
8	3902	8.9	-46 20	5.68	7.0	F8p	..	3,5 R	56,125	58	6649	9.2	-24 35	8.2	9.5	K2	2	2,1	44434b
9	3585	8.9	-48 6	8.0	9.2	Ko	8	..	18300b	59	5708	9.2	-27 2	10.5	9.3	A3	2	..	40080b
10	3405	8.9	-49 14	10.2	9.8	A2	3	..	24598b	60	4488	9.2	-34 17	var.	var.	Ko	..	R	M
11	1422	8.9	-57 20	10.1	10.1	Ao	1	..	40088b	61	4487	9.2	-34 50	8.9	9.2	B9	3	..	13054b
12	1790	9.0	+43 49	9.5	10.1	G	1	..	37704i	62	4394	9.2	-37 37	6.35	6.9	A3	8	..	8897b
13	1795	9.0	+21 21	8.6	8.7	A5	4	..	37605i	63	4107	9.2	-39 50	9.9	10.1	A2	2	..	18289b
14	2264	9.0	- 3 46	9.1	9.9	G5	2	..	21394b	64	3975	9.2	-40 9	9.05	8.9	A3	4	..	18289b
15	2264	9.0	- 4 45	9.9	9.9	Ao	3	..	21394b	65	3972	9.2	-40 11	9.40	9.2	Ao	4	..	18289b
16	2260	9.0	- 4 48	10.2	10.2	A	3	..	21394b	66	3973	9.2	-40 22	9.3	9.2	Fo	4	..	18289b
17	2389	9.0	- 7 55	8.6	9.4	G5	5	..	21394b	67	3691	9.2	-47 28	10.2	9.4	A2	6	..	18300b
18	2229	9.0	-18 34	8.2	8.3	A2	6	..	20857b	68	2880	9.2	-51 39	7.9	8.0	Ao	2	..	8952b
19	2329	9.0	-21 16	9.0	8.6	Ao	4	..	44429b	69	1557	9.2	-53 35	9.5	9.6	A2	4	..	24598b
20	6973	9.0	-23 52	10.3	9.8	Ko	1	..	44434b	70	1082	9.2	-60 40	9.5	10.1	Go	2	..	40088b
21	6974	9.0	-23 59	7.14	7.3	Fo	5	0,7	43040b	71	745	9.2	-68 5	8.7	8.8	A2	3	..	15274b
22	5162	9.0	-27 13	10.1	9.5	Ko	1	..	40080b	72	484	9.2	-73 11	8.8	8.8	Ao	3	..	22237b
23	4328	9.0	-36 12	10.6	8.6	B8	6	..	13054b	73	1889	9.3	+38 48	8.7	9.2	F8	2	..	38611i
24	3874	9.0	-41 4	10.1	9.8	G5	3	..	18289b	74	1775	9.3	+36 15	8.8	9.8	Ko	1	..	38611i
25	3883	9.0	-45 33	9.4	8.4	B8	8	..	18300b	75	1804	9.3	+17 10	9.3	9.6	Fo	1	..	38960i
26	3586	9.0	-48 26	9.8	9.2	B9	7	..	18300b	76	1912	9.3	+ 9 33	9.1	9.7	Go	3	..	20710b
27	3200	9.0	-50 54	9.4	9.3	A2	4	..	24598b	77	1913	9.3	+ 5 37	8.3	8.4	A3	4	R	20710b
28	1477	9.0	-55 53	9.1	9.2	G5	2	..	40088b	78	2446	9.3	- 5 25	9.2	9.3	A2	6	..	21394b
29	1423	9.0	-57 27	9.4	10.4	Ko	1	..	40088b	79	2447	9.3	- 5 36	8.5	9.5	Ko	5	..	21394b
30	544	9.1	+65 57	8.4	9.4	Ko	2	..	37713i	80	2445	9.3	- 5 51	9.5	9.5	Ao	3	..	21394b
31	1553	9.1	+47 6	6.99	8.17	K5	5	..	37704i	81	2272	9.3	- 8 33	7.8	8.8	Ko	7	..	21394b
32	1728	9.1	+44 35	8.6	9.4	G5	1	..	37704i	82	2283	9.3	-11 28	8.7	9.7	Ko	3	..	20896b
33	1803	9.1	+16 54	8.5	8.8	Fo	3	..	37605i	83	2282	9.3	-11 36	9.3	9.4	A2	3	..	20896b
34	1870	9.1	+13 19	9.1	10.3	K5	1	..	38960i	84	6977	9.3	-23 39	8.6	7.3	Ao	4	0,3	43040b
35	1756	9.1	+10 29	8.0	8.8	G5	3	..	37553i	85	6653	9.3	-24 27	9.6	8.9	A2	4	0,3	44434b
36	1942	9.1	- 0 14	8.43	9.43	Ko	1	..	38207i	86	5709	9.3	-31 51	7.8	8.0	B3	6	..	40080b
37	2352	9.1	-16 50	8.6	8.6	Ao	7	..	20857b	87	4400	9.3	-37 28	9.3	9.0	B9	4	..	13054b
38	2397	9.1	-17 22	9.5	10.0	F8	1	..	20857b	88	3979	9.3	-40 56	9.9	10.4	Ko	1	..	18289b
39	2446	9.1	-20 16	8.43	9.5	Ko	2	5,2	46182b	89	3996	9.3	-42 38	10.2	9.8	Ao	2	..	18289b
40	5165	9.1	-27 24	11.3	9.2	A	1	..	40080b	90	3997	9.3	-42 48	10.5	9.8	Fo	3	..	18289b
41	5163	9.1	-27 32	8.1	8.1	A2	6	..	40080b	91	4162	9.3	-44 5	9.2	9.3	K2	2	..	18289b
42	4337	9.1	-35 5	8.65	8.6	G5	2	..	13054b	92	4158	9.3	-44 45	8.00	8.4	G5	7	..	18300b
43	4336	9.1	-35 55	8.1	7.4	B3	5	..	8897b	93	3890	9.3	-45 7	10.5	9.3	B9	4	..	18300b
44	4331	9.1	-36 22	11.3	9.5	B9	2	..	13054b	94	3889	9.3	-45 48	10.5	9.3	Ao	5	..	18300b
45	4393	9.1	-37 25	9.2	8.9	B9	3	..	13054b	95	3892	9.3	-45 57	6.08	6.7	B3	..	2,6	28,202
46	3970	9.1	-40 22	11.7	10.1	Fo	1	..	18289b	96	3907	9.3	-47 3	10.0	10.2	B9	2	..	18300b
47	1071	9.1	-58 14	9.3	9.9	Go	2	..	40088b	97	3413	9.3	-49 31	8.5	9.2	G5	4	..	24598b
48	1888	9.2	+24 15	8.7	9.5	G5	1	..	37503i	98	3414	9.3	-49 34	8.5	8.7	F8	4	..	24598b
49	1889	9.2	+24 3	8.5	8.6	A2	3	..	37503i	99	1481	9.3	-56 3	8.7	9.5	G5	2	..	40088b
50	1888	9.2	+18 22	9.5	9.6	A2	2	..	37605i	100	967	9.3	-62 36	8.2	9.0	G5	2	..	13025b

## THE HENRY DRAPER CATALOGUE.

68900

8<sup>h</sup> 9<sup>m</sup>.3

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	905	m. 9.3	° 44	8.9	9.2	F	1	..	13025b	51	409	m. 9.6	° 43	6.20	7.38	K5	7	..	38187i
2	1571	9.4	+27 26	9.1	9.2	A2	2	1,2	38635i	52	410	9.6	+72 5	8.8	8.9	A2	4	..	38187i
3	1669	9.4	+16 23	7.18	7.13	B8	8	..	37605i	53	1556	9.6	+45 16	7.62	7.76	A5	7	..	37704i
4	1914	9.4	+5 43	8.4	8.5	A3	4	R	20710b	54	2028	9.6	+20 32	8.3	9.4	K2	3	..	37605i
5	2040	9.4	+1 28	7.6	7.7	A2	7	..	38271i	55	1912	9.6	+2 20	8.4	8.5	A3	7	..	38271i
6	1990	9.4	-1 9	8.8	9.2	F5	3	..	24493b	56	1992	9.6	-1 39	8.8	9.8	Ko	1	..	24493b
7	2399	9.4	-17 22	8.4	8.9	F8	5	..	20857b	57	2525	9.6	-6 36	9.2	9.5	F2	5	..	21394b
8	2400	9.4	-17 51	9.2	10.0	G5	1	..	20857b	58	2449	9.6	-21 4	8.8	8.9	Go	2	..	46182b
9	2298	9.4	-19 22	9.0	8.9	Fo	4	..	20857b	59	5172	9.6	-27 13	8.6	9.2	K5	2	..	40080b
10	2333	9.4	-22 2	8.5	9.2	Ko	1	..	44429b	60	5762	9.6	-29 30	9.4	9.5	G5	1	..	40080b
11	5751	9.4	-25 52	8.8	8.4	B8	5	..	40080b	61	4493	9.6	-35 4	8.80	8.6	Ao	4	..	13054b
12	5713	9.4	-31 33	10.5	9.5	Ao	2	..	40080b	62	4346	9.6	-36 0	7.9	7.2	B8	6	1,8	8897b
13	4990	9.4	-32 40	9.0	8.0	Ao	3	E	13054b	63	4115	9.6	-39 58	9.2	9.8	Ko	3	..	18289b
14	4690	9.4	-34 0	8.6	8.6	A2	4	..	13054b	64	3881	9.6	-41 30	8.6	8.3	B8	7	..	18289b
15	4110	9.4	-40 3	9.9	9.8	A5	2	..	18289b	65	3894	9.6	-45 18	9.8	8.7	Ao	4	..	18300b
16	3981	9.4	-40 13	9.60	9.8	Ko	2	..	18289b	66	3701	9.6	-48 0	10.9	9.9	K2	3	..	18300b
17	3879	9.4	-41 36	9.0	8.9	B9	6	..	18289b	67	1548	9.6	-56 7	9.0	9.2	Fo	3	..	40088b
18	4043	9.4	-43 48	9.8	10.3	K5	1	..	18289b	68	1074	9.6	-58 57	7.3	8.6	G5	6	..	40088b
19	4042	9.4	-44 2	9.4	9.6	G	2	..	18289b	69	884	9.6	-65 43	9.5	9.5	Ao	2	..	19155b
20	4163	9.4	-44 23	10.2	9.6	B9	3	..	18300b	70	1719	9.7	+48 52	8.8	9.8	K	1	..	38188i
21	3891	9.4	-45 16	9.8	8.7	Ao	6	..	18300b	71	1761	9.7	+10 13	9.8	9.9	A5	1	..	20710b
22	3696	9.4	-47 15	9.4	8.7	B8	8	..	18300b	72	1945	9.7	-1 4	9.1	9.9	G5	2	..	24493b
23	3695	9.4	-47 45	10.5	10.2	G5	3	..	18300b	73	2443	9.7	-13 9	8.6	9.0	F5	3	..	20896b
24	3416	9.4	-49 58	9.24	9.3	Ko	3	..	24598b	74	2332	9.7	-15 21	9.3	9.3	Ao	2	..	20857b
25	1558	9.4	-53 29	8.8	10.4	K5	2	..	24598b	75	2333	9.7	-15 44	8.8	8.9	A2	4	..	20857b
26	1072	9.4	-59 1	10.0	10.6	G	1	..	40088b	76	2303	9.7	-19 21	9.3	8.9	A3	3	..	20857b
27	994	9.4	-59 50	9.7	10.7	Ko	1	..	40088b	77	2451	9.7	-21 5	9.2	9.5	Ko	1	..	46182b
28	1084	9.4	-60 56	9.5	10.6	K2	1	..	40088b	78	5719	9.7	-31 26	6.69	8.1	Go	8	..	40080b
29	1123	9.5	+60 45	9.0	9.8	G5	1	..	37676i	79	4997	9.7	-32 59	7.8	8.6	K2	2	0,3	12788b
30	1124	9.5	+59 53	5.52	5.66	A5	10	..	37676i	80	4349	9.7	-35 35	4.77	4.60	B3p	..	3,6R	28,202
31	2015	9.5	+40 39	8.1	8.2	A3	6	..	37704i	81	4348	9.7	-36 6	8.9	8.6	B8	7	0,4	13054b
32	1841	9.5	+37 45	9.2	10.3	K2	1	..	38611i	82	4187	9.7	-38 7	7.37	7.6	B3	4	..	8897b
33	1704	9.5	+32 30	7.41	7.83	F5	6	..	38218i	83	4186	9.7	-38 45	8.9	8.9	B9	2	..	13054b
34	1671	9.5	+16 9	8.9	9.2	F2	1	..	38960i	84	3988	9.7	-41 0	10.6	10.1	A3	2	..	18289b
35	1947	9.5	+7 8	9.1	10.1	Ko	2	..	38271i	85	3883	9.7	-41 30	10.6	9.8	A	1	R	18289b
36	1915	9.5	+4 53	8.81	9.81	Ko	1	..	38271i	86	3420	9.7	-49 51	11.5	9.8	A2	3	..	24598b
37	2268	9.5	-3 32	7.50	8.57	K2	3	..	38207i	87	1484	9.7	-55 9	9.23	9.2	F2	4	..	24598b
38	2266	9.5	-4 24	9.2	9.2	Ao	4	..	21394b	88	1038	9.8	+61 46	8.0	8.6	Go	3	..	37676i
39	2391	9.5	-7 46	9.2	9.6	F5	5	..	21394b	89	1948	9.8	+7 22	8.8	8.8	Ao	4	2,2	20710b
40	2233	9.5	-18 41	9.1	9.2	A2	4	..	20857b	90	1930	9.8	+2 58	8.4	9.4	Ko	2	..	38271i
41	2300	9.5	-19 22	9.3	8.9	A2	5	..	20857b	91	2041	9.8	+1 10	9.8	10.6	G5	1	..	38271i
42	2334	9.5	-22 6	9.3	8.6	Ao	2	..	44429b	92	2455	9.8	-5 9	9.7	9.8	A2	3	..	21394b
43	R	9.5	-35 44	8.3	8.3	Ao	5	..	13054b	93	2456	9.8	-5 30	10.2	10.3	A2	3	..	21394b
44	4344	9.5	-36 2	7.9	7.3	B8	6	0,8	8897b	94	2275	9.8	-8 18	9.2	9.8	Go	2	..	21394b
45	4044	9.5	-43 27	10.0	9.3	A2	2	..	39914b	95	2276	9.8	-8 36	9.7	10.2	F8	2	..	21394b
46	3700	9.5	-47 14	10.0	9.9	B8	5	..	18300b	96	2439	9.8	-9 21	9.3	9.3	Ao	1	..	20896b
47	3596	9.5	-49 0	10.2	10.1	A	2	..	24598b	97	2284	9.8	-11 14	8.5	8.8	Fo	4	..	20896b
48	3417	9.5	-49 8	9.0	8.7	Fo	5	..	24598b	98	2334	9.8	-15 53	8.4	8.5	A5	6	..	20857b
49	969	9.5	-62 32	9.8	9.8	Ao	2	..	40095b	99	6991	9.8	-23 13	11.3	9.5	A	1	..	44434b
50	657	9.5	-71 25	7.5	8.6	K2	4	..	24527b	100	6990	9.8	-23 15	9.1	9.5	K5	1	..	44434b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

69000

8h 9m.8

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	5722	m. 9.8	° -31 14	9.1	8.9	Ao	4	..	4008ob	51	1564	m. 10.0	° -53 50	6.9	7.1	Fo	10	..	24598b
2	4705	9.8	-33 16	6.41	7.8	K <sub>2</sub>	7	0,8 R	12788b	52	1547	10.0	-54 30	9.5	9.5	B <sub>9</sub>	4	..	24598b
3	4413	9.8	-37 10	9.7	8.7	Ao	4	..	13054b	53	832	10.0	-64 12	8.9	9.3	F <sub>5</sub>	1	..	13025b
4	4414	9.8	-37 14	9.7	9.2	A	2	..	13054b	54	334	10.1	+75 9	6.53	7.53	Ko	9	..	38187i
5	3899	9.8	-45 13	9.2	8.7	Go	5	..	1830ob	55	1843	10.1	+37 36	9.9	10.3	F <sub>5</sub>	2	..	38611i
6	3897	9.8	-45 40	9.8	9.9	Ko	2	..	1830ob	56	1796	10.1	+11 45	7.8	8.6	G <sub>5</sub>	3	..	38156i
7	3918	9.8	-46 40	10.9	9.6	A <sub>2</sub>	2	..	1830ob	57	2013	10.1	+ 7 57	8.2	8.2	B <sub>9</sub>	4	..	38271i
8	1560	9.8	-53 55	9.1	10.1	F <sub>2</sub>	3	..	24598b	58	1946	10.1	- 0 28	8.4	8.5	A <sub>3</sub>	2	..	38207i
9	997	9.8	-59 46	7.22	8.9	Ko	7	..	40088b	59	2440	10.1	- 9 44	9.5	9.5	Ao	1	..	20896b
10	770	9.9	+63 32	7.51	8.07	Go	5	..	37676i	60	2446	10.1	-13 43	9.2	10.4	K <sub>5</sub>	1	..	20896b
11	1226	9.9	+53 14	8.5	8.8	Fo	4	..	38188i	61	2339	10.1	-15 15	9.9	10.0	A <sub>2</sub>	2	..	20857b
12	1557	9.9	+47 36	9.7	10.7	K	1	..	37704i	62	5767	10.1	-25 39	10.3	9.5	A <sub>2</sub>	2	..	4008ob
13	2337	9.9	-15 28	9.2	9.3	A <sub>2</sub>	2	..	20857b	63	5185	10.1	-27 17	9.8	9.3	Ao	2	..	4008ob
14	2305	9.9	-19 19	8.4	8.3	Fo	7	..	20857b	64	5673	10.1	-28 44	9.3	9.2	K <sub>2</sub>	2	..	4008ob
15	5764	9.9	-25 24	8.8	8.6	F <sub>2</sub>	4	..	4008ob	65	5001	10.1	-32 6	10.1	8.9	A	1	..	4008ob
16	5179	9.9	-27 26	10.3	8.7	B <sub>8</sub>	3	..	4008ob	66	4504	10.1	-34 54	7.00	7.6	Ko	..	5,7	56,125
17	5727	9.9	-31 15	9.1	9.8	Ko	1	..	4008ob	67	4420	10.1	-37 25	9.0	8.0	B <sub>9</sub>	7	..	13054b
18	5726	9.9	-32 0	9.4	9.2	Fo	2	..	4008ob	68	3708	10.1	-47 49	9.6	10.2	Mb	3	..	1830ob
19	3993	9.9	-40 57	9.9	8.9	Ao	6	..	18289b	69	3209	10.1	-50 11	9.1	10.0	Ko	3	..	24598b
20	3888	9.9	-41 6	8.6	8.9	Ma	6	..	18289b	70	489	10.1	-74 14	8.9	10.0	K <sub>2</sub>	1	..	22237b
21	4010	9.9	-42 56	11.5	10.4	F <sub>2</sub>	1	..	18289b	71	1837	10.2	+42 14	8.9	9.5	G	2	..	37704i
22	4174	9.9	-44 31	10.5	9.6	F <sub>5</sub>	2	..	1830ob	72	1963	10.2	+19 0	7.4	8.4	Ko	5	..	37605i
23	3919	9.9	-46 7	10.0	9.6	G <sub>5</sub>	3	..	1830ob	73	1797	10.2	+11 3	9.8	9.8	Ao	1	..	20710b
24	3424	9.9	-49 30	9.2	9.0	Ao	5	..	24598b	74	1915	10.2	+ 2 25	8.4	9.0	Go	2	..	38271i
25	3208	9.9	-50 21	8.4	9.8	K <sub>2</sub>	5	..	24598b	75	2461	10.2	- 6 1	9.2	9.3	A <sub>2</sub>	4	..	21394b
26	1545	9.9	-55 3	8.30	8.3	B <sub>5</sub>	7	..	24598b	76	2528	10.2	- 6 36	8.1	8.9	G <sub>5</sub>	7	..	21394b
27	1791	10.0	+43 15	8.9	9.5	Go	2	..	37704i	77	2395	10.2	- 7 9	9.5	9.5	Ao	2	..	21394b
28	1789	10.0	+35 52	7.7	7.7	B <sub>9</sub>	5	..	38611i	78	2452	10.2	-20 50	9.3	9.2	Ao	3	..	46182b
29	1891	10.0	+21 52	9.2	9.2	Ao	4	..	37605i	79	5732	10.2	-26 34	9.6	9.7	F <sub>5</sub>	1	..	4008ob
30	1800	10.0	+21 2	8.6	9.6	Ko	3	..	37605i	80	5742	10.2	-31 50	6.10	6.8	B <sub>3</sub>	8	0,10	43040b
31	1892	10.0	+17 53	7.8	8.8	Ko	4	..	37605i	81	4358	10.2	-36 1	5.12	4.95	B <sub>3</sub>	..	3,7	28,202
32	2011	10.0	+ 7 59	8.5	8.5	Ao	2	E	38271i	82	4360	10.2	-36 2	5.95	6.4	B <sub>8</sub>	..	R	56,125
33	1918	10.0	+ 5 51	8.6	8.6	Ao	4	..	38271i	83	4425	10.2	-37 22	8.7	8.9	G <sub>5</sub>	3	..	13054b
34	1994	10.0	- 1 42	8.8	9.6	G <sub>5</sub>	3	..	24493b	84	3996	10.2	-40 23	9.7	8.9	Ao	5	..	18289b
35	2459	10.0	- 5 14	9.25	10.03	G <sub>5</sub>	3	..	21394b	85	R	10.2	-43 41	10.1	10.2	A <sub>2</sub>	1	..	18289b
36	2435	10.0	-10 9	9.3	9.9	Go	1	..	20896b	86	4180	10.2	-44 47	10.5	10.2	K <sub>5</sub>	1	..	1830ob
37	2404	10.0	-17 26	9.2	9.3	A <sub>2</sub>	4	..	20857b	87	4181	10.2	-44 57	8.90	9.6	K <sub>5</sub>	3	..	1830ob
38	2197	10.0	-22 50	9.3	8.9	A <sub>5</sub>	3	2,3	46182b	88	1075	10.2	-58 15	9.5	9.9	F <sub>5</sub>	1	..	40088b
39	6993	10.0	-23 16	9.8	8.6	Ao	4	0,4	44434b	89	998	10.2	-59 14	9.6	10.7	K <sub>2</sub>	1	..	40088b
40	6666	10.0	-24 37	7.62	8.1	A <sub>5</sub>	3	5,3	43040b	90	356	10.3	+74 43	9.17	9.23	A <sub>2</sub>	3	..	38187i
41	5183	10.0	-27 44	8.8	9.2	Ko	2	..	4008ob	91	1575	10.3	+28 42	8.7	9.5	G <sub>5</sub>	1	..	38218i
42	4501	10.0	-34 26	8.0	8.1	Ao	5	..	13054b	92	1888	10.3	+25 1	9.11	9.30	Fo	2	E	37503i
43	4417	10.0	-37 36	9.3	9.6	A	1	..	13054b	93	1892	10.3	+22 29	8.7	9.2	F <sub>8</sub>	5	..	37605i
44	3892	10.0	-41 24	11.0	10.1	Ao	2	..	18289b	94	2014	10.3	+ 7 56	9.5	9.6	A <sub>2</sub>	2	..	20710b
45	4009	10.0	-42 24	8.5	8.4	Ao	3	0,3	8897b	95	1917	10.3	+ 2 21	8.6	9.6	Ko	3	..	38271i
46	4012	10.0	-42 38	9.6	10.1	K <sub>5</sub>	1	..	18289b	96	2232	10.3	+ 0 13	8.4	9.6	K <sub>5</sub>	1	..	38207i
47	4011	10.0	-42 50	9.6	9.8	Ko	2	..	18289b	97	2495	10.3	- 2 32	9.0	9.0	Ao	2	..	38207i
48	3603	10.0	-48 42	10.0	9.3	Fo	4	..	24598b	98	2462	10.3	- 6 0	9.2	9.3	A <sub>2</sub>	4	..	21394b
49	3426	10.0	-49 56	8.54	8.4	A <sub>2</sub>	7	..	24598b	99	2436	10.3	-10 27	9.2	9.5	F <sub>2</sub>	1	..	20896b
50	2885	10.0	-51 57	9.6	9.3	Ao	4	..	24598b	100	2416	10.3	-13 8	9.0	9.1	A <sub>2</sub>	3	..	20896b

## THE HENRY DRAPER CATALOGUE.

69100

8<sup>h</sup> 10<sup>m</sup>.3

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
		m.	°									m.	°						
1	2363	10.3	-16 58	6.88	7.30	F5	5	..	11036b	51	1919	10.6	+ 2 47	8.2	8.8	Go	3	..	38271i
2	5190	10.3	-27 6	8.2	8.9	G5	3	..	40080b	52	2048	10.6	+ 1 1	8.94	8.94	Ao	3	0,2	38271i
3	5780	10.3	-29 29	9.1	8.9	A5	4	..	40080b	53	1947	10.6	- 0 57	8.0	8.8	G5	1	..	38207i
4	5743	10.3	-31 11	9.6	9.5	A2	2	..	40080b	54	2498	10.6	- 2 53	9.2	9.3	A2	2	..	24493b
5	4358	10.3	-36 7	7.9	7.8	B8	5	0,8	8897b	55	2531	10.6	- 6 49	8.8	9.8	Ko	5	..	21394b
6	4359	10.3	-36 38	6.92	6.9	Oe5	6	..	8897b	56	2439	10.6	-10 59	8.0	9.0	Ko	4	..	20896b
7	3895	10.3	-41 16	8.9	9.5	Ko	4	..	18289b	57	2450	10.6	-13 57	9.2	10.2	Ko	2	..	20896b
8	4058	10.3	-43 49	10.9	10.2	A5	1	..	18289b	58	2240	10.6	-19 5	9.2	9.5	Ko	1	..	20857b
9	3926	10.3	-46 19	10.2	9.6	Ao	3	..	18300b	59	2338	10.6	-21 11	9.7	9.5	F8	1	..	46182b
10	999	10.3	-60 0	9.35	9.9	Go	3	..	40088b	60	2339	10.6	-21 22	8.2	8.3	Ko	4	..	18302b
11	485	10.3	-73 50	9.6	9.7	A2	1	..	22237b	61	5197	10.6	-27 10	10.5	9.2	Ao	2	..	40080b
12	1875	10.4	+13 10	9.1	9.6	F8	2	..	38960i	62	5691	10.6	-28 51	10.1	9.2	A5	2	..	40080b
13	1932	10.4	+ 3 8	7.8	7.8	Ao	6	..	38271i	63	5694	10.6	-29 1	9.8	9.0	Fo	2	..	40080b
14	2278	10.4	- 8 13	9.1	9.4	Fo	4	..	21394b	64	4003	10.6	-40 26	9.9	10.7	Ko	2	R	18289b
15	2277	10.4	- 8 43	9.5	9.9	F5	3	..	21394b	65	3904	10.6	-40 26	10.4	10.4	F5	7	..	18289b
16	2289	10.4	-11 38	9.2	10.0	G5	1	..	20896b	66	4061	10.6	-41 17	8.1	8.6	F5	7	..	18289b
17	2447	10.4	-13 56	9.2	9.3	A5	3	..	20896b	67	3931	10.6	-43 36	10.2	9.3	Ao	1	..	39914b
18	2408	10.4	-17 13	8.8	8.8	Ao	5	..	20857b	68	3611	10.6	-46 16	7.3	7.0	B3	..	0,6	28,202
19	2310	10.4	-20 3	9.03	10.0	Ko	1	..	46182b	69	3212	10.6	-48 28	10.2	10.1	Go	1	..	18300b
20	5192	10.4	-27 27	8.2	8.3	B8	5	..	40080b	70	2893	10.6	-50 47	10.5	10.4	Go	1	..	24598b
21	5191	10.4	-27 43	11.0	9.3	A	1	..	40080b	71	1077	10.6	-51 56	7.0	6.8	B8	5	..	8952b
22	4508	10.4	-34 29	8.6	9.0	G5	2	..	13054b	72	889	10.6	-58 41	9.9	9.9	Ao	3	..	40088b
23	4365	10.4	-35 11	5.82	6.9	Ko	..	0,9	56,125	73	1265	10.6	-67 22	8.5	9.5	Ko	3	..	15274b
24	4364	10.4	-36 0	9.3	8.9	B9	4	..	13054b	74	1924	10.7	+54 53	6.56	6.70	A5	7	0,8	38188i
25	4002	10.4	-40 59	9.9	8.9	A5	5	..	18289b	75	1876	10.7	+23 14	8.7	8.8	A5	2	5,2	38635i
26	3896	10.4	-41 9	8.7	8.9	B9	7	..	18289b	76	2017	10.7	+13 29	8.9	9.7	G5	2	..	38960i
27	4184	10.4	-44 56	11.5	10.1	Ao	2	..	18300b	77	1933	10.7	+ 8 1	8.6	9.4	G5	2	..	20710b
28	3902	10.4	-45 9	9.10	9.3	B8	4	..	18300b	78	2272	10.7	+ 3 6	7.07	7.07	Ao	7	..	38271i
29	3903	10.4	-45 17	10.5	9.9	Ko	2	..	18300b	79	2463	10.7	- 4 40	9.0	9.8	G5	2	..	21394b
30	3904	10.4	-45 39	8.6	7.9	F2	8	..	18300b	80	2532	10.7	- 5 43	8.4	9.4	Ko	5	..	21394b
31	3609	10.4	-48 8	8.5	8.3	B8	8	..	18300b	81	2403	10.7	- 6 58	9.9	9.9	Ao	2	..	21394b
32	1568	10.4	-53 27	10.1	10.1	Ao	4	..	24598b	82	2402	10.7	- 7 9	9.9	10.5	Go	2	..	21394b
33	1567	10.4	-53 44	9.8	10.4	Go	3	..	24598b	83	2291	10.7	- 8 4	9.2	9.2	Ao	3	..	21394b
34	1000	10.4	-59 44	7.9	9.8	K5	4	..	40088b	84	2343	10.7	-11 10	9.7	9.8	A3	2	..	20896b
35	1126	10.5	+60 48	8.5	8.8	Fo	4	..	37676i	85	2454	10.7	-16 7	8.1	9.5	Ma	4	..	20857b
36	1378	10.5	+46 32	9.2	10.0	G5	1	..	37704i	86	5745	10.7	-21 2	8.6	9.2	Ko	2	..	18302b
37	2270	10.5	- 4 16	9.3	9.8	F8	2	..	21394b	87	5744	10.7	-26 8	9.1	8.9	A2	4	..	40080b
38	2409	10.5	-17 50	9.5	9.5	B9	1	..	20857b	88	3909	10.7	-26 39	10.3	9.5	A2	2	..	40080b
39	5774	10.5	-25 41	8.0	8.3	Ao	7	..	40080b	89	3911	10.7	-41 21	10.6	10.1	Fo	3	..	18289b
40	5740	10.5	-26 25	10.5	9.3	A3	2	..	40080b	90	4190	10.7	-41 24	var.	var.	Pec.	..	R	18289b
41	4368	10.5	-35 50	8.9	8.3	A2	6	..	13054b	91	3933	10.7	-44 26	7.5	7.8	Ko	7	..	18300b
42	4128	10.5	-40 2	4.43	6.7	Ko	..	0,2 R	28,202	92	3716	10.7	-46 38	9.8	8.5	B9	4	..	18300b
43	4060	10.5	-43 19	9.6	9.9	K2	1	..	18289b	93	3430	10.7	-47 28	10.9	9.6	Ao	4	..	18300b
44	3929	10.5	-46 41	5.28	5.2	B3	..	0,10	28,202	94	2895	10.7	-49 53	5.44	7.2	K5	..	0,5-	56,125
45	3428	10.5	-50 2	9.24	9.8	F2	3	..	24598b	95	1089	10.7	-51 34	10.5	10.0	A2	3	..	24598b
46	3210	10.5	-50 16	10.9	10.1	A2	2	..	24598b	96	1557	10.7	-60 53	9.1	9.8	Fo	3	..	40088b
47	2892	10.5	-51 26	9.4	9.5	F5	4	..	24598b	97	1795	10.8	+45 3	8.6	9.0	F5	2	..	37704i
48	991	10.6	+62 49	5.77	6.33	Go	9	..	37676i	98	1680	10.8	+43 49	8.2	8.6	F5	3	..	37704i
49	1215	10.6	+54 26	6.40	7.58	K5	7	..	38188i	99	1799	10.8	+30 39	8.2	8.3	A3	3	..	38218i
50	1922	10.6	+23 5	8.9	9.0	A5	2	..	38635i	100		10.8	+11 10	8.4	8.8	F5	1	..	38156i

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

69200

8<sup>h</sup> 10<sup>m</sup>.8

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1948	10.8	- 0 55	9.1	9.1	Ao	2	..	38207i	51	5754	11.0	-31 18	9.8	9.5	Ao	2	..	40080b
2	1996	10.8	- 1 18	9.1	9.4	Fo	2	..	24493b	52	4442	11.0	-37 36	7.9	7.7	B9	3	..	8897b
3	2445	10.8	- 9 9	8.2	9.6	Ma	2	..	21394b	53	4014	11.0	-40 31	6.75	6.4	B5	..	2,7	28,202
4	7016	10.8	-23 18	10.1	9.5	A5	2	..	44434b	54	4031	11.0	-42 48	10.0	9.5	B9	3	..	18289b
5	7015	10.8	-23 56	9.8	9.5	Ao	2	0,1	46182b	55	4198	11.0	-44 45	10.9	9.6	A3	3	..	18300b
6	5780	10.8	-25 48	9.8	9.3	G5	1	..	40080b	56	3937	11.0	-46 20	8.6	8.7	Ko	5	..	18300b
7	5910	10.8	-30 36	9.1	8.7	B8	4	..	40080b	57	3938	11.0	-46 37	8.0	7.8	F5	3	0,8	8952b
8	5911	10.8	-30 41	10.5	9.5	Ao	1	..	40080b	58	3436	11.0	-49 14	9.2	9.5	G5	2	..	24598b
9	4436	10.8	-37 33	9.3	9.2	B9	2	..	13054b	59	3435	11.0	-49 26	9.8	9.8	Fo	3	..	24598b
10	4205	10.8	-38 12	7.5	8.0	A2	4	..	8897b	60	3215	11.0	-50 14	10.2	9.5	B9	4	..	24598b
11	4007	10.8	-40 49	9.5	9.5	Ko	2	..	18289b	61	3216	11.0	-50 56	10.9	10.4	Ao	1	..	24598b
12	4026	10.8	-42 17	9.2	9.8	G5	2	..	18289b	62	984	11.0	-61 33	8.8	9.6	F5	4	..	40088b
13	4192	10.8	-44 16	7.0	7.5	Fo	6	0,2	8897b	63	1287	11.1	+56 34	7.14	8.32	K5	5	..	37676i
14	3934	10.8	-46 54	8.8	8.2	Ao	3	2,7	8952b	64	1925	11.1	+23 4	8.5	9.0	F8	2	..	37605i
15	3718	10.8	-47 14	11.5	9.6	B8	4	..	18300b	65	1894	11.1	+22 13	8.6	9.1	F8	4	..	37605i
16	1486	10.8	-55 8	9.6	10.4	G5	2	..	24598b	66	1800	11.1	+11 22	7.48	8.55	K2	2	..	38156i
17	890	10.8	-67 28	9.9	9.9	A	1	..	15274b	67	1917	11.1	+ 9 30	3.76	4.83	K2	..	3,9 R	1657c
18	732	10.8	-70 29	7.2	8.2	Ko	4	..	24527b	68	1944	11.1	+ 4 22	8.2	9.4	K5	1	..	38271i
19	350	10.8	-77 14	9.0	9.4	F5	2	..	22237b	69	2276	11.1	- 4 19	9.7	10.0	Fo	2	..	21394b
20	284	10.9	+78 15	7.98	7.98	Ao	4	..	37493i	70	2275	11.1	- 4 57	9.1	9.7	Go	3	..	21394b
21	1803	10.9	+21 32	7.54	8.32	G5	5	..	37605i	71	2465	11.1	- 5 34	8.5	8.6	A5	7	..	21394b
22	1915	10.9	+ 9 44	7.72	8.79	K2	4	..	20710b	72	2467	11.1	- 5 54	9.5	10.1	Go	2	..	21394b
23	1920	10.9	+ 5 21	8.8	9.8	Ko	1	..	38271i	73	2412	11.1	-17 52	9.2	9.2	Ao	2	..	20857b
24	1943	10.9	+ 4 6	8.4	9.6	K5	1	..	38271i	74	7024	11.1	-23 20	8.4	7.7	Ao	2	..	11036b
25	2533	10.9	- 7 2	8.2	9.3	K2	4	..	21394b	75	7022	11.1	-23 56	10.3	9.8	Ao	1	..	44434b
26	2404	10.9	- 7 19	9.3	10.5	K5	2	..	21394b	76	6693	11.1	-24 40	9.4	9.0	Ko	3	5,3	44434b
27	2293	10.9	-11 56	9.1	9.2	A2	3	..	20896b	77	5759	11.1	-26 38	10.3	9.5	Ao	2	..	40080b
28	2292	10.9	-12 7	9.0	9.8	G5	2	..	20896b	78	5214	11.1	-27 54	10.8	8.9	F8	2	..	40080b
29	2452	10.9	-13 19	7.20	8.55	Ma	7	..	20896b	79	5709	11.1	-28 22	10.3	9.2	G5	1	..	40080b
30	2344	10.9	-15 50	9.1	9.2	A5	3	..	20857b	80	4380	11.1	-35 23	6.76	7.6	K2	5	..	13054b
31	2368	10.9	-16 20	8.8	9.6	G5	1	..	20857b	81	4379	11.1	-35 44	10.1	9.2	A	1	..	13054b
32	5750	10.9	-26 49	9.4	9.5	K5	2	..	40080b	82	3620	11.1	-48 56	8.4	8.0	Ao	3	1,9	8952b
33	5699	10.9	-28 8	8.0	7.8	Ao	6	..	40080b	83	3437	11.1	-50 0	7.99	8.4	Ko	7	..	24598b
34	5700	10.9	-28 45	9.1	8.6	Ao	4	..	40080b	84	3217	11.1	-50 51	9.4	10.9	K5	1	..	24598b
35	4012	10.9	-40 12	7.95	7.7	Ao	3	..	8897b	85	534	11.2	+67 51	7.19	8.54	Ma	6	..	37713i
36	4028	10.9	-42 9	10.5	9.8	Ao	1	..	18289b	86	1560	11.2	+44 56	9.20	9.76	Go	1	..	37704i
37	4069	10.9	-43 9	10.5	10.2	A	1	..	18289b	87	1891	11.2	+38 11	8.2	8.5	F2	3	E	37390i
38	4070	10.9	-43 23	8.9	8.7	G5	2	..	39914b	88	1900	11.2	+18 24	8.4	9.5	K2	2	..	37605i
39	3617	10.9	-48 38	10.5	9.5	B8	2	..	18300b	89	1901	11.2	+18 15	9.1	9.2	A2	4	..	37605i
40	1091	10.9	-60 39	8.7	9.5	F5	4	..	40088b	90	1921	11.2	+ 2 10	9.1	9.5	F5	2	..	38271i
41	806	10.9	-67 4	8.6	9.6	Ko	2	..	15274b	91	2470	11.2	- 5 27	9.3	10.4	K2	1	..	21394b
42	1796	11.0	+43 43	7.46	7.74	Fo	7	..	37704i	92	2281	11.2	- 8 45	8.8	9.6	G5	4	..	21394b
43	1803	11.0	+12 2	var.	var.	Md	8	R	20710b	93	2448	11.2	- 9 28	8.0	9.0	Ko	2	..	20896b
44	1915	11.0	+ 6 36	8.2	9.0	G5	1	..	20710b	94	2242	11.2	-18 35	8.8	9.8	Ko	2	..	20857b
45	1914	11.0	+ 6 26	9.1	9.7	Go	1	..	20710b	95	5812	11.2	-29 33	10.3	9.2	Fo	2	..	40080b
46	2407	11.0	- 7 50	9.9	9.9	Ao	2	..	21394b	96	5926	11.2	-30 23	11.0	10.1	A2	1	..	40080b
47	2443	11.0	-10 8	9.16	10.23	K2	1	..	20896b	97	5927	11.2	-31 0	9.3	9.3	Ao	3	..	40080b
48	5704	11.0	-28 55	9.8	9.2	Ko	1	..	40080b	98	4139	11.2	-39 27	9.3	8.9	A2	3	..	24747b
49	5917	11.0	-30 6	8.04	8.0	Ao	3	..	43040b	99	4034	11.2	-42 23	10.5	10.1	Ao	2	..	18289b
50	5918	11.0	-30 33	7.40	8.0	A3	3	..	43040b	100	4035	11.2	-42 55	11.5	10.4	A	1	..	18289b

## THE HENRY DRAPER CATALOGUE.

69300

8<sup>h</sup> 11<sup>m</sup>.2

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	4202	11.2	-45 0	9.04	9.0	F5	5	..	18300b	51	2504	11.5	-2 55	7.11	7.61	F8	5	..	38207i
2	3914	11.2	-45 31	6.02	6.2	B3	7	..	8952b	52	2283	11.5	-8 39	8.6	9.7	K2	4	..	21394b
3	3619	11.2	-48 11	8.9	8.7	B9	6	..	18300b	53	2450	11.5	-9 9	9.3	10.3	Ko	2	..	21394b
4	3622	11.2	-48 45	8.5	8.4	Ao	8	..	24598b	54	2243	11.5	-19 6	7.28	8.4	K5	1	..	11036b
5	2897	11.2	-51 36	10.0	10.5	K5	1	..	24598b	55	2321	11.5	-19 45	8.4	7.7	Fo	3	..	11036b
6	1414	11.2	-52 5	9.4	10.0	Go	4	..	24598b	56	4084	11.5	-43 12	9.6	9.3	B9	2	..	18289b
7	1572	11.2	-53 33	9.4	10.4	Ko	1	..	24598b	57	4209	11.5	-45 3	10.2	9.3	Ao	2	..	18300b
8	735	11.2	-71 2	8.4	8.5	A2	3	0.3	19155b	58	3917	11.5	-45 45	10.2	9.0	B3	3	..	18300b
9	249	11.3	+80 49	9.7	9.8	A5	2	..	37493i	59	3946	11.5	-46 35	9.8	8.8	B8	4	..	18300b
10	1381	11.3	+46 35	9.7	9.7	Ao	1	..	37704i	60	3624	11.5	-48 21	11.5	10.1	Ao	1	..	18300b
11	2082	11.3	+39 7	7.7	8.5	G5	3	..	37390i	61	3219	11.5	-50 12	9.09	8.9	A3	6	..	24598b
12	1575	11.3	+27 21	7.43	8.50	K2	3	0.3	38218i	62	909	11.5	-63 41	8.2	8.3	A2	2	..	8913b
13	1891	11.3	+24 59	9.16	9.44	Fo	1	..	38635i	63	494	11.5	-76 20	8.6	9.7	K2	3	..	22237b
14	1950	11.3	+7 42	7.8	7.9	A3	3	..	38271i	64	1892	11.6	+25 8	7.41	8.41	Ko	5	..	38635i
15	2280	11.3	-4 43	9.3	10.4	K2	1	..	21394b	65	1806	11.6	+11 40	7.78	8.78	Ko	2	..	38156i
16	2536	11.3	-6 40	9.2	10.4	K5	1	..	21394b	66	1952	11.6	+7 23	9.1	10.1	Ko	1	..	20710b
17	2428	11.3	-12 26	9.5	9.5	Ao	1	..	20896b	67	2472	11.6	-5 40	9.9	10.7	G5	1	..	21394b
18	5794	11.3	-25 50	9.1	9.3	Ko	1	..	40080b	68	2297	11.6	-11 15	8.6	8.9	F2	3	..	20896b
19	5216	11.3	-27 19	8.6	8.6	B9	4	..	40080b	69	2457	11.6	-13 31	9.2	9.2	Ao	2	..	20896b
20	5764	11.3	-31 24	9.4	8.9	Ao	4	..	40080b	70	2447	11.6	-14 40	9.3	9.4	A5	2	..	20857b
21	4382	11.3	-36 2	9.9	9.2	Ao	2	..	13054b	71	2351	11.6	-15 23	7.30	8.30	Ko	6	..	20857b
22	4381	11.3	-36 22	8.3	7.6	B9	4	..	8897b	72	2417	11.6	-17 33	8.6	8.6	Ao	6	..	20857b
23	3918	11.3	-41 52	9.9	9.2	Ao	5	..	18289b	73	2244	11.6	-18 53	9.7	9.7	Ao	4	..	20857b
24	4203	11.3	-44 55	8.24	8.2	B8	7	..	18300b	74	2204	11.6	-22 50	9.5	9.2	Ao	2	..	44434b
25	3916	11.3	-45 18	10.5	9.6	A2	2	..	18300b	75	5723	11.6	-28 52	9.8	8.7	Ao	3	..	40080b
26	3726	11.3	-47 20	10.0	9.8	F5	3	..	18300b	76	5773	11.6	-31 40	8.2	8.0	B9	6	..	40080b
27	1079	11.3	-58 25	9.1	10.1	F2	1	..	40088b	77	4388	11.6	-35 56	8.9	8.3	Ao	5	..	13054b
28	625	11.4	+65 42	8.1	8.9	G5	3	..	37713i	78	4385	11.6	-36 10	8.6	8.3	B9	6	..	13054b
29	1288	11.4	+56 46	9.0	9.8	G5	1	..	37409i	79	4029	11.6	-40 8	8.85	8.9	B9	5	..	18289b
30	1785	11.4	+36 2	6.91	7.19	Fo	6	..	38611i	80	4088	11.6	-43 54	10.9	10.1	A2	1	..	18289b
31	1897	11.4	+21 57	9.9	10.3	F5	2	..	37605i	81	4086	11.6	-44 3	10.5	9.6	Ao	2	..	18289b
32	1804	11.4	+21 30	8.7	8.8	A2	3	..	37605i	82	3920	11.6	-45 31	9.0	9.0	G5	3	..	18300b
33	1951	11.4	+7 41	7.6	8.0	F5	4	..	38271i	83	3947	11.6	-46 37	10.5	9.3	B5	3	..	18300b
34	2537	11.4	-6 53	9.0	10.1	K2	1	..	21394b	84	3948	11.6	-46 51	8.9	8.5	F8	6	..	18300b
35	2408	11.4	-7 40	9.1	9.7	Go	4	..	21394b	85	3625	11.6	-48 35	10.5	10.0	B8	2	..	18300b
36	2373	11.4	-17 4	9.2	9.2	Ao	2	..	20857b	86	1415	11.6	-52 39	9.3	10.4	K2	2	..	24598b
37	2414	11.4	-18 8	9.5	9.5	Ao	1	..	20857b	87	862	11.6	-69 25	8.8	8.8	Ao	3	..	15274b
38	5797	11.4	-25 40	9.6	8.9	B9	3	..	40080b	88	408	11.7	+72 58	9.5	10.3	G5	2	..	38187i
39	5767	11.4	-31 53	10.3	9.2	Ao	2	..	40080b	89	462	11.7	+69 21	7.8	8.1	F2	5	..	37713i
40	4026	11.4	-40 42	7.9	8.4	G5	7	..	18289b	90	1799	11.7	+43 12	8.9	9.4	F8	2	..	37704i
41	3920	11.4	-41 32	10.3	9.8	A2	4	..	18289b	91	1848	11.7	+37 29	7.9	9.1	K5	2	..	37390i
42	3922	11.4	-41 44	8.1	7.7	B8	5	R	39914b	92	1893	11.7	+25 46	8.3	9.3	Ko	2	E	37503i
43	3921	11.4	-41 55	9.5	9.2	Go	3	..	18289b	93	1904	11.7	+18 46	9.5	9.5	A	2	..	37605i
44	4081	11.4	-43 39	10.5	9.6	Ao	1	..	39914b	94	2409	11.7	-7 33	9.3	9.9	Go	2	..	21394b
45	3944	11.4	-47 2	9.8	9.9	K2	3	..	18300b	95	2285	11.7	-8 44	9.0	9.6	Go	5	..	21394b
46	3440	11.4	-49 40	9.6	9.5	F5	3	..	24598b	96	2300	11.7	-11 27	9.3	10.5	K5	1	..	20896b
47	3442	11.4	-50 4	8.99	8.6	B8	7	..	24598b	97	2301	11.7	-11 32	9.9	10.3	F5	1	..	20896b
48	1560	11.5	+47 20	7.46	8.24	G5	5	..	37704i	98	2374	11.7	-16 8	9.2	9.6	F5	1	..	20857b
49	1576	11.5	+27 43	7.8	8.8	Ko	3	..	38218i	99	2418	11.7	-17 22	9.2	9.6	F5	1	..	20857b
50	2020	11.5	+8 33	9.8	9.8	Ao	1	..	20710b	100	5940	11.7	-30 17	8.1	8.7	Go	4	..	40080b

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8<sup>h</sup> 11<sup>m</sup>.7

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	4389	11.7	-35 37	9.3	8.6	Ao	3	..	13054b	51	3925	11.9	-45 14	10.5	9.6	Ao	1	..	18300b
2	4389	11.7	-37 3	7.24	6.7	B8	6	..	8897b	52	3736	11.9	-47 19	11.5	9.9	Ao	3	..	18300b
3	4211	11.7	-44 26	10.2	9.4	A3	2	..	18300b	53	1418	11.9	-52 30	9.0	9.5	F8	4	..	24598b
4	3951	11.7	-46 10	6.57	6.8	B3p	..	1,7 R	28,202	54	978	11.9	-62 11	8.3	8.6	Fo	5	..	40088b
5	3733	11.7	-47 14	10.9	10.2	B9	2	..	18300b	55	864	11.9	-69 27	7.5	8.5	Ko	6	..	15274b
6	1080	11.7	-58 19	8.3	8.9	Fo	5	..	40088b	56	2040	12.0	+20 7	8.1	8.2	A2	5	..	37605i
7	737	11.7	-70 12	8.87	8.5	B9	4	..	24527b	57	2055	12.0	+1 40	8.2	9.2	Ko	2	..	38271i
8	327	11.8	+77 17	7.14	8.14	Ko	6	..	37714i	58	2285	12.0	-5 0	8.95	8.95	Ao	4	..	21394b
9	1723	11.8	+49 46	8.22	8.50	Fo	3	..	38188i	59	2284	12.0	-5 6	7.85	8.85	Ko	2	..	38207i
10	1779	11.8	+31 8	8.1	8.4	F2	3	..	38218i	60	2291	12.0	-8 42	7.02	7.02	Ao	9	..	21394b
11	1867	11.8	+13 54	9.1	9.7	Go	2	..	38960i	61	2452	12.0	-14 38	9.2	9.2	Ao	3	..	20857b
12	1807	11.8	+11 5	8.6	8.9	F2	1	..	38156i	62	2248	12.0	-18 16	9.2	9.2	Ao	5	..	20857b
13	2473	11.8	-5 15	9.20	9.98	G5	2	..	21394b	63	2327	12.0	-19 44	8.2	8.6	Ko	5	..	20857b
14	2540	11.8	-6 33	9.2	10.2	Ko	1	..	21394b	64	4396	12.0	-35 19	8.80	8.6	B	2	R	13054b
15	2539	11.8	-6 38	9.9	9.9	A	1	..	21394b	65	4153	12.0	-39 25	9.3	9.2	Ao	3	..	24747b
16	2412	11.8	-7 52	9.3	9.3	Ao	5	..	21394b	66	4154	12.0	-39 57	8.60	9.5	K2	3	..	18289b
17	2460	11.8	-13 37	9.7	10.0	Fo	1	..	20896b	67	3932	12.0	-41 15	9.3	9.5	B9	5	..	18289b
18	2348	11.8	-21 12	8.8	8.9	Ao	3	..	18302b	68	4049	12.0	-42 9	10.0	9.8	Go	1	..	18289b
19	2207	11.8	-22 9	9.3	9.2	Ao	3	2,3	44434b	69	4218	12.0	-44 30	9.2	9.6	Ko	2	..	18300b
20	7047	11.8	-23 35	10.8	9.2	A3	2	..	44434b	70	1581	12.0	-53 13	10.3	10.4	A2	2	..	24598b
21	6708	11.8	-24 55	8.20	8.9	Go	4	0,4	44434b	71	1082	12.0	-58 15	8.5	8.9	A2	5	..	40088b
22	5727	11.8	-28 16	10.3	8.6	B9	4	..	40080b	72	1003	12.0	-59 19	9.7	10.1	F5	2	..	40088b
23	5945	11.8	-30 18	8.6	8.6	Ao	6	..	40080b	73	1230	12.1	+53 4	9.2	10.2	Ko	1	..	38188i
24	5943	11.8	-30 31	9.1	8.3	B5	6	..	40080b	74	1404	12.1	+51 40	8.9	9.3	F5	1	..	38188i
25	4390	11.8	-36 49	9.3	9.0	B	2	R	13054b	75	2022	12.1	+40 2	8.3	8.8	F8	2	E	37704i
26	3923	11.8	-45 55	9.8	9.1	Fo	5	..	18300b	76	1730	12.1	+29 24	8.1	8.2	A3	3	..	38218i
27	3735	11.8	-48 1	10.5	10.1	Ao	2	..	18300b	77	1760	12.1	+26 45	7.04	7.12	A3	7	..	37503i
28	3446	11.8	-49 41	9.2	8.7	Ao	6	..	24598b	78	1921	12.1	+9 11	6.31	7.31	Ko	7	..	38156i
29	1556	11.8	-54 26	9.1	9.2	Ao	5	..	24598b	79	1945	12.1	+4 31	6.68	7.24	Go	7	R	38271i
30	1558	11.8	-56 57	9.0	9.8	G5	1	..	40088b	80	1945	12.1	+4 31	6.68	7.24	A2	7	R	38271i
31	1440	11.8	-57 28	8.5	9.5	Ko	3	..	40088b	81	1925	12.1	+2 39	9.1	9.1	Ao	1	..	38271i
32	807	11.8	-66 6	9.1	10.3	K5	1	..	19155b	82	2286	12.1	-4 53	9.5	10.5	Ko	1	..	21394b
33	626	11.9	+65 45	8.0	8.6	Go	5	..	37713i	83	2474	12.1	-6 6	8.6	9.6	Ko	3	..	21394b
34	1849	11.9	+37 22	7.48	8.48	Ko	4	..	37390i	84	2542	12.1	-6 43	9.1	9.1	Ao	5	..	21394b
35	2023	11.9	+8 0	8.9	8.9	Ao	2	..	20710b	85	2414	12.1	-7 39	9.2	10.0	G5	3	..	21394b
36	2289	11.9	-8 14	9.1	9.4	Fo	6	..	21394b	86	2415	12.1	-7 55	9.3	10.3	Ko	2	..	21394b
37	2290	11.9	-8 44	7.6	8.4	G5	2	..	21394b	87	2292	12.1	-8 39	9.3	10.4	K2	4	..	21394b
38	2356	11.9	-16 1	7.6	8.6	Ko	6	..	20857b	88	2435	12.1	-12 17	8.4	8.4	Ao	4	..	20896b
39	2419	11.9	-17 55	9.3	9.8	F8	1	..	20857b	89	2454	12.1	-14 59	9.7	10.5	G5	2	..	20857b
40	5236	11.9	-27 7	10.1	9.7	A	1	..	40080b	90	2376	12.1	-16 20	8.2	9.2	Ko	2	..	20857b
41	5733	11.9	-28 29	8.4	8.1	Ao	5	..	40080b	91	2329	12.1	-20 4	8.93	9.2	Ko	2	..	46182b
42	5730	11.9	-28 33	10.5	9.3	A	2	..	40080b	92	4053	12.1	-42 8	9.1	9.5	G5	3	..	18289b
43	5835	11.9	-29 29	10.3	8.9	B8	3	..	40080b	93	3929	12.1	-45 53	8.9	8.7	Ko	5	..	18300b
44	5836	11.9	-29 52	7.03	8.0	G5	4	..	43040b	94	2907	12.1	-52 4	9.6	9.5	Fo	6	..	24598b
45	5946	11.9	-30 37	6.30	7.3	G5	6	..	43040b	95	836	12.1	-64 40	9.0	9.6	Go	2	..	40095b
46	5948	11.9	-30 51	8.1	9.3	K5	2	..	40080b	96	992	12.2	+62 0	8.7	9.5	G5	1	..	37676i
47	4751	11.9	-33 46	8.1	9.0	Ko	1	..	12788b	97	1267	12.2	+55 31	8.0	8.6	Go	3	..	38188i
48	4092	11.9	-43 13	9.0	8.2	A5	3	..	39914b	98	1894	12.2	+38 3	8.0	9.0	Ko	2	..	37390i
49	4216	11.9	-44 53	10.9	9.9	Ao	1	..	18300b	99	1808	12.2	+11 9	8.8	9.6	G5	1	..	20710b
50	4215	11.9	-45 0	9.8	9.4	Fo	4	..	18300b	100	1922	12.2	+9 29	8.4	9.6	K5	2	..	38156i



## THE HENRY DRAPER CATALOGUE.

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8<sup>h</sup> 12<sup>m</sup>.2

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
		m.	° ' "									m.	° ' "						
1	2511	12.2	- 2 54	8.4	8.8	F5	4	..	24493b	51	1675	12.4	+33 39	7.74	7.74	Ao	5	..	38218i
2	2509	12.2	- 3 3	6.58	6.56	B9	7	..	38207i	52	1869	12.4	+13 57	8.8	9.9	K2	1	..	3896ci
3	2286	12.2	- 3 57	9.0	9.3	Fo	3	..	21394b	53	1920	12.4	+ 6 20	9.1	9.2	A2	2	..	20710b
4	2475	12.2	- 5 38	9.7	10.3	Go	3	..	21394b	54	2056	12.4	+ 1 28	7.62	8.62	Ko	4	..	38271i
5	2450	12.2	-10 56	9.5	9.5	B9	2	..	20896b	55	2477	12.4	- 5 21	9.0	9.6	Go	4	..	21394b
6	2436	12.2	-12 16	9.2	9.2	Ao	3	..	20896b	56	2479	12.4	- 5 41	9.7	9.7	Ao	3	..	21394b
7	2466	12.2	-20 43	8.4	8.7	K2	4	..	20857b	57	2452	12.4	-10 21	9.2	9.3	A3	3	..	20896b
8	6722	12.2	-24 39	9.6	9.0	Ao	2	0,2	44434b	58	2451	12.4	-10 34	8.21	9.39	K5	3	..	20896b
9	5788	12.2	-31 16	9.0	9.3	Ko	2	..	40080b	59	2466	12.4	-14 6	9.3	9.3	B9	2	..	20896b
10	5787	12.2	-31 27	9.8	9.2	F8	2	..	40080b	60	2379	12.4	-16 36	9.3	9.3	Ao	2	..	20857b
11	4401	12.2	-35 35	6.20	7.3	K2	7	..	13054b	61	2251	12.4	-18 51	8.8	8.8	Ao	1	..	11036b
12	4222	12.2	-44 26	10.2	9.6	Ao	1	..	18300b	62	2358	12.4	-21 34	6.70	6.8	B3	8	..	11036b
13	4225	12.2	-44 55	9.4	9.0	Ao	7	..	18300b	63	5245	12.4	-27 47	10.1	9.7	G5	1	..	40080b
14	3633	12.2	-48 53	7.9	7.4	Ao	3	2,9	8952b	64	5747	12.4	-28 9	8.8	8.7	Ao	4	..	40080b
15	2908	12.2	-52 4	10.5	9.8	F2	2	..	24598b	65	4406	12.4	-35 34	6.99	8.1	G5	5	..	13054b
16	1420	12.2	-52 28	9.7	10.0	Fo	3	..	24598b	66	4103	12.4	-43 46	10.0	10.2	K2	1	..	18289b
17	1559	12.2	-56 27	7.4	7.6	Ao	7	..	40088b	67	4104	12.4	-44 1	9.1	8.8	B8	3	..	39914b
18	754	12.2	-68 28	9.5	9.9	F5	1	..	19155b	68	3741	12.4	-47 10	9.4	9.0	A2	5	..	18300b
19	491	12.2	-74 12	8.9	9.9	Ko	1	..	22237b	69	3740	12.4	-47 18	8.5	9.3	G5	4	..	18300b
20	233	12.2	-80 36	9.3	10.1	G5	1	..	20869b	70	2910	12.4	-51 54	10.2	10.7	Ko	1	..	24598b
21	1711	12.3	+32 7	8.5	8.6	A3	3	..	38218i	71	1421	12.4	-52 20	10.0	10.1	A2	3	..	24598b
22	1896	12.3	+25 44	9.2	9.3	A2	2	..	38635i	72	1583	12.4	-53 26	10.3	10.4	A2	1	..	24598b
23	1919	12.3	+ 6 34	7.54	8.61	K2	2	..	38271i	73	1584	12.4	-54 4	9.8	10.4	Go	2	..	24598b
24	2001	12.3	- 1 32	8.4	9.4	Ko	1	..	38207i	74	1491	12.4	-55 13	9.13	9.5	G5	5	..	24598b
25	2287	12.3	- 4 20	9.5	9.5	Ao	3	..	21394b	75	1005	12.4	-59 59	9.32	9.5	A2	5	..	40088b
26	2288	12.3	- 5 4	7.75	8.09	F2	3	..	38207i	76	986	12.4	-61 9	7.1	8.4	A2	5	0,8	8913b
27	2476	12.3	- 5 16	9.10	10.17	K2	1	..	21394b	77	980	12.4	-62 8	8.9	8.9	Ao	5	..	40088b
28	2416	12.3	- 7 40	9.7	10.5	G5	1	..	21394b	78	893	12.4	-68 4	9.3	9.7	F5	1	..	19155b
29	2457	12.3	-14 38	8.6	8.6	Ao	4	..	20857b	79	1041	12.5	+61 46	9.2	9.8	G	1	..	37676i
30	2456	12.3	-14 50	7.26	8.33	K2	5	..	20857b	80	1813	12.5	+41 11	8.6	9.1	F8	2	..	37704i
31	2357	12.3	-15 56	8.8	8.8	Ao	4	..	20857b	81	2248	12.5	+ 0 48	7.74	7.80	A2	7	..	38271i
32	2423	12.3	-17 33	9.7	9.7	Ao	1	..	20857b	82	2512	12.5	- 2 47	7.53	8.31	G5	4	..	38207i
33	2335	12.3	-19 36	8.6	8.9	K5	3	..	20857b	83	2291	12.5	- 4 30	9.0	9.3	Fo	4	..	21394b
34	2333	12.3	-20 2	9.3	9.8	K2	1	..	46182b	84	2480	12.5	- 6 2	9.9	10.5	Go	1	..	21394b
35	6725	12.3	-24 37	10.1	9.3	Fo	1	..	44434b	85	2294	12.5	- 9 2	9.3	9.4	A2	3	..	21394b
36	6724	12.3	-24 56	10.1	9.5	F2	1	..	44434b	86	2454	12.5	- 9 30	9.1	10.1	Ko	2	..	21394b
37	4401	12.3	-36 58	10.3	9.0	Ao	2	..	13054b	87	2453	12.5	-10 9	8.66	8.66	Ao	6	..	20896b
38	4226	12.3	-44 47	10.2	9.9	Ko	1	..	18300b	88	2438	12.5	-12 34	8.4	9.5	K2	2	..	20896b
39	4228	12.3	-44 56	10.5	9.3	Ao	3	..	18300b	89	2467	12.5	-21 0	6.52	6.7	Ao	10	..	11036b
40	3935	12.3	-45 42	10.9	9.0	A3	4	..	18300b	90	5859	12.5	-29 13	10.5	9.8	B9	2	..	40080b
41	3964	12.3	-46 45	10.0	9.0	Ao	4	..	18300b	91	5860	12.5	-29 44	9.6	8.6	B8	4	..	40080b
42	3965	12.3	-46 57	10.9	9.3	Ao	3	..	18300b	92	3937	12.5	-41 23	9.7	9.6	B9	5	..	18289b
43	3453	12.3	-49 50	9.4	9.2	Ao	4	..	24598b	93	4231	12.5	-44 29	11.5	10.1	A	1	..	18300b
44	3225	12.3	-50 8	9.38	9.0	B8	4	..	24598b	94	3742	12.5	-47 14	10.9	9.6	A3	2	..	18300b
45	1444	12.3	-57 48	10.1	10.1	A	1	..	40088b	95	3454	12.5	-49 11	10.5	10.4	A2	1	..	24598b
46	1446	12.3	-58 4	9.4	10.4	Ko	1	..	40088b	96	3227	12.5	-50 8	6.41	8.0	K2	8	..	24598b
47	297	12.3	-78 24	7.5	8.5	Ko	4	0,4	20869b	97	1447	12.5	-57 52	8.4	9.2	Ko	4	..	40088b
48	1112	12.4	+58 3	5.94	6.28	F2	10	..	37676i	98	1006	12.5	-59 11	9.3	9.8	F8	2	..	40088b
49	1131	12.4	+57 37	7.6	8.4	G5	2	..	37676i	99	987	12.5	-61 14	9.1	10.1	Ko	2	..	40088b
50	1530	12.4	+50 36	8.1	9.1	Ko	3	..	38188i	100	738	12.5	-70 58	7.6	7.9	F2	7	..	24527b



## ANNALS OF HARVARD COLLEGE OBSERVATORY.

69600

8<sup>h</sup> 12<sup>m</sup>.6

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	463	12.6	+69 12	9.2	10.0	G5	1	..	37713i	51	3746	12.7	-48 3	10.9	9.6	B8	3	..	18300b
2	1232	12.6	+53 31	7.7	8.8	K2	4	..	38188i	52	3642	12.7	-48 58	7.7	7.7	A2	4	0,9	8952b
3	1407	12.6	+51 35	8.0	8.1	A3	4	..	38188i	53	3456	12.7	-49 42	7.8	7.2	B8	4	3,9	8952b
4	1561	12.6	+45 47	7.7	8.8	K2	3	..	37704i	54	2916	12.7	-51 18	9.2	9.0	A0	7	..	24598b
5	1895	12.6	+38 52	8.7	8.7	A0	3	..	37390i	55	2914	12.7	-51 45	6.55	7.2	Go	5	..	8952b
6	1900	12.6	+22 32	8.8	8.9	A3	4	..	37605i	56	1422	12.7	-52 16	8.9	10.1	K5	2	..	24598b
7	1954	12.6	+7 36	8.8	9.3	F8	2	..	20710b	57	1084	12.7	-58 32	9.8	9.9	A2	1	..	40088b
8	1942	12.6	+3 6	7.67	8.74	K2	2	..	38271i	58	990	12.7	-61 22	9.0	9.6	F5	3	..	40088b
9	1926	12.6	+2 47	7.8	7.8	A0	4	..	38271i	59	360	12.8	+74 45	8.62	9.69	K2	2	..	38187i
10	2513	12.6	-2 25	9.2	9.6	F5	3	..	24493b	60	1132	12.8	+57 16	8.2	8.5	F0	2	..	37676i
11	2288	12.6	-3 40	7.6	8.1	F8	3	..	38207i	61	2026	12.8	+39 55	7.97	8.97	K0	3	0,3	38611i
12	2296	12.6	-8 47	8.4	9.4	K0	4	..	21394b	62	1811	12.8	+11 25	8.8	9.8	K0	1	..	20710b
13	2455	12.6	-10 37	9.2	10.2	K0	1	..	20896b	63	2005	12.8	-1 28	7.6	8.4	G5	5	..	38207i
14	2456	12.6	-10 42	9.7	9.7	A0	2	..	20896b	64	2417	12.8	-7 45	9.5	10.0	F8	2	..	21394b
15	2305	12.6	-11 27	8.6	8.9	F0	5	..	20896b	65	2362	12.8	-15 58	6.31	6.31	A0	7	0,8	8827b
16	2441	12.6	-12 40	9.2	9.3	A5	1	..	20896b	66	2382	12.8	-16 8	9.0	9.1	A3	2	..	20857b
17	2469	12.6	-20 15	9.18	9.8	Go	1	..	46182b	67	2338	12.8	-19 50	9.3	8.9	A0	6	..	20857b
18	5797	12.6	-26 24	9.3	8.9	F5	3	..	40080b	68	6737	12.8	-25 2	9.35	8.6	A0	3	0,3	44434b
19	5248	12.6	-27 33	8.19	8.7	K0	4	..	40080b	69	5068	12.8	-32 53	8.6	8.6	F8	3	E	40080b
20	4413	12.6	-35 54	6.92	6.9	B5	7	..	8897b	70	4771	12.8	-33 50	9.0	8.9	A5	2	..	12788b
21	4109	12.6	-43 16	9.8	9.6	A5	2	..	18289b	71	4416	12.8	-35 23	10.6	9.2	A0	2	..	13054b
22	3971	12.6	-46 31	10.0	9.4	Go	3	..	18300b	72	4414	12.8	-35 26	10.1	8.6	B9	5	..	13054b
23	3744	12.6	-47 19	10.5	10.3	K0	4	..	18300b	73	4487	12.8	-37 10	8.9	8.7	A5	3	..	13054b
24	3638	12.6	-48 45	8.3	8.1	A0	7	..	24598b	74	4165	12.8	-39 26	6.99	8.0	K0	9	..	24747b
25	894	12.6	-67 14	8.9	9.5	Go	3	..	15274b	75	4164	12.8	-39 34	8.9	8.9	A2	3	..	18289b
26	537	12.7	+67 48	8.6	9.6	K	2	..	37713i	76	4116	12.8	-43 20	9.0	9.9	K5	2	..	18289b
27	1234	12.7	+53 23	8.8	9.6	G5	2	..	38188i	77	3943	12.8	-45 53	11.5	10.1	A0	1	..	18300b
28	2045	12.7	+19 56	8.25	8.67	F5	4	..	37605i	78	3748	12.8	-47 14	9.0	8.1	B9	7	..	18300b
29	1679	12.7	+15 59	6.61	7.61	K0	8	..	37605i	79	3747	12.8	-47 31	10.0	8.8	A0	4	..	18300b
30	1812	12.7	+11 58	7.96	8.02	A2	3	..	38156i	80	1561	12.8	-56 29	9.6	10.4	G5	1	..	40088b
31	1768	12.7	+10 46	9.1	9.2	A3	1	..	38156i	81	247	12.8	-81 42	9.5	9.6	A2	1	..	20869b
32	1923	12.7	+6 32	7.05	8.05	K0	4	..	38271i	82	1217	12.9	+53 53	6.36	6.64	F0	9	..	38188i
33	1943	12.7	+3 15	7.72	8.72	K0	3	..	38271i	83	1408	12.9	+51 21	9.2	9.2	A	1	..	38188i
34	2290	12.7	-4 3	9.2	10.2	K0	2	..	21394b	84	1762	12.9	+26 39	7.04	7.32	F0	6	..	37503i
35	2292	12.7	-4 39	10.6	10.6	A0	2	..	21394b	85	1813	12.9	+11 1	9.5	9.5	A0	1	..	20710b
36	2481	12.7	-5 20	9.3	9.9	Go	5	..	21394b	86	1927	12.9	+9 28	7.02	6.97	B8	7	..	38156i
37	2470	12.7	-20 23	9.2	8.9	A0	4	..	20857b	87	2482	12.9	-6 6	8.4	9.4	K0	3	..	21394b
38	2361	12.7	-21 18	9.3	9.2	A0	1	..	18302b	88	5254	12.9	-27 15	9.1	8.3	B5	4	..	40080b
39	2360	12.7	-21 57	8.8	9.5	K0	2	5,2	44429b	89	5762	12.9	-29 4	9.3	10.0	K5	1	..	40080b
40	2212	12.7	-22 57	9.9	9.5	A2	1	..	44434b	90	4414	12.9	-36 21	8.0	8.9	K2	2	..	13054b
41	7070	12.7	-23 46	10.3	9.2	A0	3	..	44434b	91	4241	12.9	-38 21	8.3	8.9	K5	1	..	13054b
42	6735	12.7	-24 6	11.3	9.2	A5	1	..	44434b	92	4242	12.9	-38 30	7.9	8.9	K2	1	..	13054b
43	6734	12.7	-24 53	9.6	9.3	G5	1	0,1	44434b	93	4238	12.9	-44 24	10.2	9.6	A0	3	..	18300b
44	5252	12.7	-27 33	11.3	9.5	A0	2	..	40080b	94	3976	12.9	-46 53	9.2	9.0	F8	4	..	18300b
45	5756	12.7	-28 44	11.0	9.5	A	1	..	40080b	95	1423	12.9	-52 23	9.8	10.4	G	1	..	24598b
46	4162	12.7	-39 33	8.6	8.1	B8	3	..	18289b	96	810	12.9	-66 18	9.5	9.5	A0	4	..	19155b
47	4114	12.7	-43 55	9.0	8.7	F8	3	..	39914b	97	1409	13.0	+51 38	8.8	9.8	K0	1	..	38188i
48	4113	12.7	-44 1	8.2	8.1	B2	4	R	39914b	98	1807	13.0	+21 48	8.1	9.1	K0	4	..	37605i
49	4234	12.7	-44 40	9.6	9.9	K2	1	..	18300b	99	1870	13.0	+14 1	8.9	9.3	F5	2	..	38960i
50	3942	12.7	-46 0	6.76	7.4	A2	7	..	8952b	100	1928	13.0	+9 29	9.1	9.1	A0	4	2,1	20710b

## THE HENRY DRAPER CATALOGUE.

69700

8<sup>h</sup> 13<sup>m</sup>.0

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1924	13.0	+ 6 19	8.4	9.6	K5	1	..	20710b	51	1784	13.3	+31 1	8.5	9.6	K2	1	..	38218i
2	2307	13.0	-12 3	9.3	9.3	B9	3	..	20896b	52	1929	13.3	+ 5 30	7.8	8.2	F5	3	..	38271i
3	2256	13.0	-18 28	9.0	9.8	G5	1	..	20857b	53	2418	13.3	- 7 50	9.9	10.3	F5	1	..	21394b
4	2362	13.0	-21 31	8.8	8.9	K5	1	..	18302b	54	2261	13.3	-18 20	8.8	9.9	K2	2	..	20857b
5	7077	13.0	-23 26	8.6	8.0	A0	2	..	11036b	55	6751	13.3	-24 42	7.62	8.9	Ma	4	0.3-	40080b
6	5075	13.0	-32 14	9.5	8.9	A2	2	..	40080b	56	5843	13.3	-26 0	7.18	7.7	F5	7	..	40080b
7	4420	13.0	-36 3	10.8	9.2	A2	1	..	13054b	57	5775	13.3	-28 50	7.59	8.4	Ko	5	..	40080b
8	4418	13.0	-36 38	10.1	8.9	B9	2	..	13054b	58	5981	13.3	-30 24	9.1	9.2	Ko	4	..	40080b
9	3944	13.0	-41 35	8.3	9.2	K2	5	..	18289b	59	5983	13.3	-30 46	9.8	9.8	F8	1	..	40080b
10	4120	13.0	-44 3	9.1	8.7	A0	3	..	39914b	60	4573	13.3	-34 12	7.46	7.6	A0	7	..	13054b
11	1592	13.0	-53 14	8.0	8.0	F0	2	..	8952b	61	4425	13.3	-35 37	9.9	8.7	B9	3	..	13054b
12	1493	13.0	-55 7	9.66	9.5	A0	2	..	24598b	62	3953	13.3	-45 45	8.6	8.4	Ko	7	..	18300b
13	1563	13.1	+44 59	7.97	8.39	F5	5	..	37704i	63	3987	13.3	-46 8	10.0	9.0	F2	4	..	18300b
14	1814	13.1	+40 52	8.8	9.3	F8	2	..	37704i	64	915	13.3	-63 56	8.9	9.0	A2	2	..	13025b
15	1802	13.1	+35 22	7.07	7.21	A5	6	0.7	38218i	65	493	13.3	-74 42	8.1	8.2	A3	5	..	22237b
16	1713	13.1	+32 50	8.7	9.1	F5	1	..	38218i	66	1269	13.4	+55 20	8.7	9.3	G	2	E	37409i
17	1909	13.1	+18 38	8.4	8.9	F8	5	..	37605i	67	1803	13.4	+35 31	7.20	8.20	Ko	5	0.3	38611i
18	1871	13.1	+14 36	9.1	9.6	F8	2	..	38960i	68	1910	13.4	+18 29	9.5	10.1	G	2	..	37605i
19	1955	13.1	+ 7 43	8.9	9.0	A2	3	..	20710b	69	1956	13.4	+ 7 22	9.1	9.2	A3	4	..	20710b
20	1928	13.1	+ 5 24	7.8	8.8	Ko	2	..	38271i	70	2300	13.4	- 8 31	9.9	10.4	F8	2	..	21394b
21	2291	13.1	- 3 42	8.6	9.6	Ko	4	..	21394b	71	2461	13.4	-10 11	9.06	10.06	Ko	2	..	20896b
22	2545	13.1	- 6 54	9.2	9.5	F2	2	..	21394b	72	2460	13.4	-14 40	8.0	8.0	B8	8	..	20857b
23	2298	13.1	- 9 4	9.7	9.7	A0	2	..	21394b	73	2217	13.4	-22 22	9.3	8.9	A2	3	0.2	44434b
24	2257	13.1	-18 39	8.0	8.1	A2	3	..	11036b	74	7088	13.4	-23 29	10.3	8.3	B8	4	2.3	18302b
25	5975	13.1	-30 29	9.3	9.8	Ko	2	..	40080b	75	5844	13.4	-25 7	11.0	9.5	A2	2	..	44434b
26	4568	13.1	-34 33	8.1	8.6	F8	3	..	13054b	76	5825	13.4	-31 43	8.8	8.9	A2	4	..	40080b
27	4174	13.1	-39 38	9.3	8.9	A2	4	..	24747b	77	4423	13.4	-36 48	8.9	8.3	A0	5	..	13054b
28	3945	13.1	-41 57	9.3	8.9	B9	5	..	18289b	78	3949	13.4	-41 34	11.0	9.8	A2	2	..	18289b
29	4241	13.1	-44 52	9.1	9.3	Ko	3	..	18300b	79	3950	13.4	-41 35	9.9	9.5	B8	2	..	18289b
30	3647	13.1	-48 53	8.4	8.0	B9	8	1.2	24598b	80	4125	13.4	-43 8	9.2	8.8	A3	3	..	39914b
31	3648	13.1	-49 3	9.0	10.4	K2	1	..	24598b	81	3955	13.4	-45 17	9.2	9.0	G5	5	..	18300b
32	1008	13.1	-59 19	9.3	10.1	G5	3	..	40088b	82	3755	13.4	-47 31	9.6	8.5	A3	6	..	18300b
33	538	13.2	+66 52	7.46	8.46	Ko	4	..	37713i	83	758	13.4	-68 21	9.4	9.7	F0	1	..	19155b
34	1903	13.2	+24 29	7.11	7.89	G5	5	..	37605i	84	669	13.4	-72 53	8.5	8.5	A0	4	..	22237b
35	2049	13.2	+20 18	8.7	8.8	A3	4	..	37605i	85	508	13.5	+69 59	8.94	9.08	A5	3	..	37713i
36	1948	13.2	+ 4 42	8.60	9.60	Ko	2	..	20710b	86	1586	13.5	+26 57	8.3	8.7	F5	3	..	38218i
37	2515	13.2	- 2 44	9.2	9.3	A3	3	..	24493b	87	1810	13.5	+21 34	8.3	9.1	G5	3	..	37605i
38	2365	13.2	-15 29	8.6	8.9	F0	3	..	20857b	88	1687	13.5	+16 26	6.79	6.79	A0	9	..	37605i
39	2260	13.2	-18 48	9.3	10.1	G5	2	..	20857b	89	2423	13.5	- 7 15	7.54	7.82	F0	8	..	21394b
40	5810	13.2	-26 59	9.1	8.9	F5	3	..	40080b	90	2422	13.5	- 7 41	9.2	9.8	Go	2	..	21394b
41	5076	13.2	-32 42	8.1	8.0	A2	5	0.5	13054b	91	2387	13.5	-16 33	8.0	9.0	Ko	4	..	20857b
42	4057	13.2	-40 47	9.9	9.8	F5	2	..	18289b	92	2429	13.5	-18 8	9.0	9.3	F0	3	..	20857b
43	3947	13.2	-41 49	9.5	10.1	K2	1	..	18289b	93	2366	13.5	-21 29	8.8	8.0	B9	6	..	18302b
44	3951	13.2	-45 57	10.0	10.2	K2	1	..	18300b	94	6756	13.5	-24 8	9.4	9.5	G5	2	5.2-	40080b
45	3753	13.2	-47 10	9.8	8.8	B8	4	..	18300b	95	6758	13.5	-25 1	9.30	9.2	F8	2	..	44434b
46	3754	13.2	-47 16	10.0	9.6	Go	3	..	18300b	96	5814	13.5	-26 41	10.8	9.7	A0	2	..	40080b
47	894	13.2	-65 37	8.5	9.5	Ko	3	..	19155b	97	5815	13.5	-26 42	9.8	9.9	A5	2	..	40080b
48	895	13.2	-65 43	9.2	9.5	F2	3	..	19155b	98	5816	13.5	-26 50	8.0	8.9	F8	4	..	40080b
49	1564	13.3	+45 16	8.9	9.3	F5	1	..	37704i	99	5884	13.5	-29 19	11.3	9.8	F2	2	..	40080b
50	2027	13.3	+40 12	6.77	7.77	Ko	7	..	37704i	100	4428	13.5	-35 12	8.75	8.6	F8	3	..	13054b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

69800

8<sup>h</sup> 13<sup>m</sup> 5

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	3236	13.5	-50 34	9.6	10.1	G	1	..	24598b	51	7099	13.8	-24 0	8.8	8.9	K2	3	2,2	44434b
2	1567	13.5	-56 25	9.1	10.4	Ma	1	..	40088b	52	5276	13.8	-27 17	10.5	9.7	Ma	1	..	44434b
3	1457	13.5	-57 19	9.7	9.8	A2	1	..	40088b	53	5893	13.8	-29 18	9.6	8.9	B9	4	..	40080b
4	531	13.6	+68 45	8.6	9.6	Ko	2	..	37713i	54	4185	13.8	-39 47	9.5	9.8	F5	2	..	24747b
5	1161	13.6	+59 25	8.0	8.0	Ao	4	..	37676i	55	3958	13.8	-45 16	10.9	9.1	F5	4	..	18300b
6	1791	13.6	+36 10	8.6	9.6	Ko	1	..	38611i	56	3959	13.8	-45 27	8.8	9.0	Ko	7	..	18300b
7	1898	13.6	+25 18	8.5	8.5	Ao	3	E	37503i	57	3656	13.8	-48 58	9.8	9.5	B9	4	..	24598b
8	1796	13.6	+15 21	8.6	8.9	Fo	3	..	37605i	58	3237	13.8	-50 14	10.2	10.1	Ko	2	..	24598b
9	1872	13.6	+14 30	8.2	8.8	Go	2	..	38156i	59	2924	13.8	-51 9	9.2	10.1	K2	3	..	24598b
10	2293	13.6	-4 51	9.0	10.0	Ko	2	..	21394b	60	1012	13.8	-59 45	7.99	9.6	K5	4	..	40088b
11	2463	13.6	-9 49	7.91	8.91	Ko	6	..	20896b	61	1095	13.8	-60 45	8.8	9.3	Ao	4	..	40088b
12	2309	13.6	-11 45	9.2	9.6	F5	2	..	20896b	62	995	13.8	-61 33	10.0	10.1	A2	2	..	40088b
13	2368	13.6	-15 35	8.7	9.9	K5	1	..	20857b	63	985	13.8	-62 37	5.26	5.7	A2	..	R	56,125
14	2369	13.6	-15 46	9.2	9.2	Ao	2	..	20857b	64	897	13.8	-65 58	9.1	9.9	G5	1	..	19155b
15	5851	13.6	-25 12	10.8	9.5	A2	1	..	44434b	65	1565	13.9	+47 44	8.0	8.8	G5	3	..	37704i
16	5270	13.6	-27 53	9.4	9.5	Ko	1	..	40080b	66	1588	13.9	+27 11	8.2	9.2	Ko	2	..	38218i
17	5887	13.6	-29 23	7.05	7.6	Ao	7	2,10	43040b	67	1899	13.9	+25 4	8.5	9.7	K5	2	..	38635i
18	5087	13.6	-32 34	6.96	7.2	A2	7	2,10	40080b	68	1812	13.9	+21 16	8.1	8.1	B9	6	..	37605i
19	4258	13.6	-38 51	8.3	8.0	Ao	5	..	13054b	69	1928	13.9	+6 0	8.6	9.6	Ko	1	..	20710b
20	4084	13.6	-42 25	9.1	8.9	A2	3	..	39914b	70	2522	13.9	-3 0	8.7	9.1	F5	2	..	38207i
21	4086	13.6	-42 47	9.2	8.6	A2	3	..	39914b	71	2295	13.9	-3 46	8.2	8.6	F5	5	..	21394b
22	3957	13.6	-45 43	10.0	8.8	B9	5	..	18300b	72	2552	13.9	-7 5	10.2	10.6	F5	1	..	21394b
23	3758	13.6	-47 45	9.8	8.7	Ao	6	..	18300b	73	2428	13.9	-7 54	9.9	10.9	Ko	1	..	21394b
24	3650	13.6	-48 8	9.0	8.6	Ao	7	..	18300b	74	2302	13.9	-8 32	9.2	10.0	G5	2	..	21394b
25	2923	13.6	-51 38	9.2	9.2	B8	5	..	24598b	75	2310	13.9	-11 43	9.7	9.8	A5	1	..	20896b
26	1594	13.6	-53 45	9.6	10.6	K	1	..	24598b	76	2346	13.9	-19 57	9.2	8.6	A2	2	..	18302b
27	361	13.7	+74 21	8.9	9.9	Ko	3	..	38187i	77	2221	13.9	-22 55	8.2	8.9	Ma	3	..	18302b
28	2294	13.7	-3 43	9.5	10.1	Go	2	..	21394b	78	5827	13.9	-26 41	8.8	8.4	A3	6	..	40080b
29	2294	13.7	-5 4	8.90	9.90	Ko	3	..	21394b	79	5897	13.9	-29 42	6.43	7.7	Ko	5	0,8	43040b
30	2449	13.7	-12 18	6.04	6.82	G5	10	R	20896b	80	5895	13.9	-29 51	10.1	9.8	A2	2	..	40080b
31	2389	13.7	-16 29	8.6	9.8	K5	2	..	20857b	81	6001	13.9	-30 9	8.78	8.6	B9	7	..	40080b
32	2344	13.7	-19 53	9.0	8.4	Ao	6	..	20857b	82	4090	13.9	-42 13	6.9	8.0	B2	7	..	39914b
33	6762	13.7	-24 50	10.3	9.2	A3	3	0,2-	40080b	83	4254	13.9	-44 22	9.0	8.4	Ao	7	1,3	24747b
34	6761	13.7	-25 3	7.95	8.6	F5	6	..	40080b	84	3961	13.9	-45 12	9.00	9.9	K5	1	..	18300b
35	5890	13.7	-29 33	10.5	9.5	A2	2	..	40080b	85	4003	13.9	-46 29	10.9	9.6	Go	2	..	18300b
36	4583	13.7	-34 51	8.4	9.2	K	1	..	13054b	86	2925	13.9	-52 3	10.9	10.1	G5	2	..	24598b
37	4183	13.7	-39 56	8.00	7.8	Ao	5	..	8897b	87	1425	13.9	-52 27	7.08	6.7	B8	5	..	8952b
38	3996	13.7	-46 19	10.2	8.7	B9	6	..	18300b	88	1567	13.9	-54 49	9.5	10.6	K2	1	..	24598b
39	3651	13.7	-48 15	8.3	8.1	Ao	3	..	8952b	89	1568	13.9	-56 32	9.8	10.4	Go	1	..	40088b
40	3654	13.7	-48 26	8.9	8.7	Ao	8	..	18300b	90	1570	13.9	-56 49	9.5	9.5	B9	2	..	40088b
41	3470	13.7	-49 35	8.5	7.7	B5	2	3,8	8952b	91	1569	13.9	-56 58	8.3	8.0	B8	6	..	40088b
42	3471	13.7	-49 39	9.4	9.5	A2	2	..	24598b	92	464	14.0	+69 14	7.16	7.58	F5	8	..	37713i
43	3472	13.7	-49 46	9.4	9.5	Fo	3	..	24598b	93	1134	14.0	+56 57	7.9	8.7	G5	1	..	37676i
44	1595	13.7	-53 11	8.8	8.9	F5	7	..	24598b	94	1567	14.0	+47 44	8.2	8.7	F8	5	..	37704i
45	1717	13.8	+32 39	8.1	8.6	F8	2	..	38218i	95	1847	14.0	+42 25	8.4	8.9	F8	2	..	37704i
46	1958	13.8	+7 6	8.8	9.4	Go	3	..	20710b	96	1897	14.0	+38 39	8.6	9.7	K2	2	..	37390i
47	1932	13.8	+2 50	8.2	8.7	F8	3	..	38271i	97	1589	14.0	+27 32	5.16	5.58	F5	8	R	38218i
48	2486	13.8	-5 52	8.8	9.6	G5	4	..	21394b	98	2487	14.0	-5 47	10.2	10.5	F2	2	..	21394b
49	2426	13.8	-7 35	9.0	9.3	Fo	3	..	21394b	99	2553	14.0	-6 50	9.5	10.1	Go	1	..	21394b
50	2345	13.8	-19 27	9.7	9.5	Ao	2	..	20857b	100	2311	14.0	-11 50	9.9	10.0	A2	1	..	20896b

## THE HENRY DRAPER CATALOGUE.

69900

8<sup>h</sup> 14<sup>m</sup>.0

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	2466	14.0	-14 16	6.82	6.88	A2	4	2,9	8827b	51	3957	14.2	-41 25	9.3	9.2	Ao	5	..	18289b
2	2479	14.0	-21 6	9.7	9.2	Ao	1	..	18302b	52	4007	14.2	-46 35	7.8	7.5	Ao	3	..	8952b
3	4800	14.0	-34 2	8.3	8.6	Ao	5	..	13054b	53	4008	14.2	-46 43	10.0	9.0	B9	6	..	18300b
4	4441	14.0	-35 46	6.53	7.0	K5	5	..	8897b	54	3242	14.2	-50 18	10.0	10.0	F8	2	..	24598b
5	4069	14.0	-40 35	8.9	9.8	K5	2	..	18289b	55	1601	14.2	-53 10	8.2	7.6	A2	4	..	8952b
6	4068	14.0	-40 42	8.9	8.7	Ao	6	0,2	18289b	56	1570	14.2	-54 31	9.6	9.6	Ao	4	..	24598b
7	3954	14.0	-41 59	10.8	10.4	Ao	1	..	18289b	57	1014	14.2	-59 25	9.1	10.1	Ko	3	..	40088b
8	3759	14.0	-47 7	10.5	9.0	B8	6	..	18300b	58	497	14.2	-76 48	8.7	9.9	K5	3	..	22237b
9	3760	14.0	-47 57	9.8	9.1	Ao	4	..	18300b	59	545	14.3	+66 4	8.19	8.69	F8	5	..	37713i
10	3763	14.0	-48 2	11.5	10.1	Ao	2	..	18300b	60	1135	14.3	+57 10	7.9	8.7	G5	2	..	37676i
11	3475	14.0	-49 26	9.8	9.2	Ao	4	..	24598b	61	1794	14.3	+36 6	6.93	6.93	Ao	6	..	37390i
12	1428	14.0	-52 10	10.1	10.1	Ao	3	..	24598b	62	1901	14.3	+25 49	8.3	8.7	F5	3	E	37503i
13	1427	14.0	-52 55	8.1	8.0	B9	2	..	8952b	63	1929	14.3	+5 58	8.9	9.9	Ko	2	..	20710b
14	1599	14.0	-53 44	9.1	10.4	K2	3	..	24598b	64	2300	14.3	-4 50	9.3	9.4	A5	4	..	21394b
15	1598	14.0	-53 48	9.4	10.4	Ko	2	..	24598b	65	2489	14.3	-5 18	7.55	8.11	Go	3	..	38207i
16	411	14.1	+73 20	9.4	10.4	Ko	2	..	38187i	66	2433	14.3	-7 14	7.24	8.42	K5	7	..	21394b
17	1565	14.1	+45 37	8.0	8.1	A2	4	..	37704i	67	2469	14.3	-9 32	9.3	9.9	Go	1	..	20896b
18	1907	14.1	+24 8	8.3	8.3	Ao	5	..	37605i	68	2480	14.3	-20 14	9.03	8.7	Ao	2	..	18302b
19	2554	14.1	-6 23	9.0	10.0	Ko	2	..	21394b	69	7110	14.3	-23 56	9.8	9.5	Ko	1	..	44434b
20	2430	14.1	-7 19	9.0	9.8	G5	1	..	21394b	70	4441	14.3	-36 35	9.7	8.6	Ao	3	..	13054b
21	2466	14.1	-9 42	9.0	9.5	F8	1	..	20896b	71	4272	14.3	-38 31	8.9	8.3	Fo	3	..	13054b
22	2457	14.1	-12 40	9.0	9.1	A2	2	..	20896b	72	4010	14.3	-46 15	10.0	9.0	B9	7	..	18300b
23	2348	14.1	-19 39	9.1	8.7	A3	5	..	20857b	73	3771	14.3	-47 37	7.1	7.2	B5	6	..	8952b
24	6769	14.1	-24 19	7.9	7.7	Ao	7	0,3	44434b	74	3477	14.3	-49 19	10.0	9.8	A3	2	..	24598b
25	5285	14.1	-27 22	11.5	9.5	A	1	..	40080b	75	1494	14.3	-55 25	8.6	8.9	A2	5	..	24598b
26	5904	14.1	-30 1	9.08	9.8	K5	1	..	40080b	76	1043	14.4	+60 57	6.48	7.26	G5	7	..	37676i
27	5844	14.1	-31 50	8.6	8.9	B8	4	..	40080b	77	1728	14.4	+49 20	9.2	9.8	G	1	..	38188i
28	5099	14.1	-32 18	9.9	8.6	Ao	3	..	40080b	78	1692	14.4	+16 33	8.0	9.2	K5	3	..	37605i
29	4265	14.1	-38 48	8.4	8.6	B8	4	..	13054b	79	2313	14.4	-11 12	8.6	10.0	Ma	1	..	20896b
30	4136	14.1	-43 19	9.1	8.7	B3	3	..	39914b	80	2312	14.4	-11 14	9.0	9.8	G5	1	..	20896b
31	4255	14.1	-44 53	9.0	9.0	F5	5	..	18300b	81	2437	14.4	-17 41	9.2	9.3	A2	2	..	20857b
32	3963	14.1	-45 23	10.2	9.6	B9	2	..	18300b	82	2371	14.4	-21 15	8.6	8.3	Ao	2	..	11036b
33	3962	14.1	-45 59	10.2	9.4	Ao	3	..	18300b	83	2372	14.4	-21 49	8.6	8.4	Go	4	2,4	18302b
34	3765	14.1	-47 22	8.3	7.6	B9	2	..	8952b	84	5803	14.4	-29 2	9.6	9.0	Ao	2	..	40080b
35	358	14.1	-77 44	9.0	10.0	Ko	1	..	22237b	85	6017	14.4	-30 48	9.8	9.5	F5	1	..	40080b
36	1271	14.2	+55 40	8.5	8.9	F5	3	E	37676i	86	4523	14.4	-37 10	8.6	7.3	B9	5	..	13054b
37	1911	14.2	+22 16	9.2	9.8	G	2	..	37605i	87	3959	14.4	-41 30	9.9	9.8	G5	1	..	18289b
38	2057	14.2	+20 10	8.1	8.9	G5	5	..	37605i	88	3960	14.4	-41 37	8.7	9.5	Ko	1	..	18289b
39	1934	14.2	+1 55	8.4	8.4	Ao	3	..	38271i	89	4145	14.4	-43 15	9.8	9.1	B8	3	..	18289b
40	2299	14.2	-4 13	8.6	9.8	K5	3	..	21394b	90	4012	14.4	-46 36	11.5	9.6	Ao	5	..	18300b
41	2297	14.2	-4 23	9.5	9.6	A5	3	..	21394b	91	2930	14.4	-51 24	10.0	9.3	A2	5	..	24598b
42	2431	14.2	-7 11	8.6	9.6	Ko	4	..	21394b	92	1604	14.4	-53 24	8.0	7.6	Ao	4	..	8952b
43	2472	14.2	-10 20	9.5	9.6	A2	2	..	20896b	93	1532	14.5	+50 39	8.8	9.6	G5	2	..	38188i
44	2271	14.2	-18 42	9.5	9.5	Ao	2	..	20857b	94	1817	14.5	+21 4	5.93	6.71	G5	9	..	37605i
45	2370	14.2	-21 45	8.8	9.2	G5	2	5,1	46182b	95	2030	14.5	+7 55	9.3	9.4	A2	2	..	20710b
46	5869	14.2	-25 17	10.1	8.6	A2	4	..	40080b	96	1962	14.5	-0 28	8.5	9.5	Ko	3	0,3	38207i
47	5866	14.2	-26 3	7.5	8.6	K5	5	..	40080b	97	2471	14.5	-9 52	6.32	6.46	A5	10	..	20896b
48	5905	14.2	-29 16	9.6	8.4	B8	5	..	40080b	98	2314	14.5	-11 20	9.0	9.1	A3	6	..	20896b
49	4438	14.2	-36 15	10.3	8.7	A2	2	..	13054b	99	2475	14.5	-13 18	8.7	9.9	K5	1	..	20896b
50	4073	14.2	-40 53	9.9	10.1	G5	1	..	18289b	100	5841	14.5	-26 19	9.1	8.6	Ao	3	..	40080b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

70000

8<sup>h</sup> 14<sup>m</sup>.5

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	5291	14.5	-27 13	8.2	8.4	Fo	6	..	4008ob	51	1808	14.8	+35 39	8.1	9.5	Ma	1	..	38611i
2	4452	14.5	-35 9	5.66	6.6	K <sub>2</sub>	8	..	8897b	52	2271	14.8	+ 0 32	8.4	9.5	K <sub>2</sub>	1	..	38271i
3	4443	14.5	-37 4	6.54	6.2	Ao	5	..	8897b	53	1964	14.8	- 0 56	8.2	9.3	K <sub>2</sub>	2	0,2	38207i
4	3962	14.5	-41 50	9.9	10.1	Ko	1	..	18289b	54	2316	14.8	-11 49	9.2	9.2	Ao	5	..	20896b
5	3961	14.5	-41 59	10.1	10.1	Ao	1	..	18289b	55	2461	14.8	-13 6	9.3	9.3	Ao	2	..	20896b
6	4098	14.5	-43 0	10.5	10.7	K	1	..	18289b	56	5849	14.8	-26 28	9.1	9.0	F8	2	..	4008ob
7	4015	14.5	-46 46	8.2	8.1	Fo	8	..	18300b	57	5927	14.8	-29 12	8.4	9.5	K <sub>2</sub>	3	..	4008ob
8	3479	14.5	-49 57	9.6	9.8	F <sub>5</sub>	2	..	24598b	58	5928	14.8	-29 26	9.3	8.6	B8	3	..	4008ob
9	1000	14.5	-62 4	8.4	9.3	A <sub>2</sub>	3	..	40088b	59	4460	14.8	-35 13	8.40	7.5	Ao	6	..	13054b
10	1044	14.6	+61 32	9.2	9.2	A	1	..	37676i	60	4449	14.8	-36 21	4.43	4.57	A <sub>5</sub>	..	R	28,202
11	1909	14.6	+24 20	5.87	5.87	Ao	9	R	38635i	61	4530	14.8	-37 27	9.2	8.6	B <sub>9</sub>	2	..	13054b
12	1934	14.6	+ 5 3	8.50	8.56	A <sub>2</sub>	2	..	38271i	62	4080	14.8	-40 25	9.3	8.8	B <sub>9</sub>	1	..	13064b
13	1954	14.6	+ 4 15	6.29	7.07	G <sub>5</sub>	8	..	38271i	63	4268	14.8	-44 15	9.8	9.6	Go	2	..	24747b
14	1938	14.6	+ 2 20	8.2	8.3	A <sub>5</sub>	3	..	38271i	64	3972	14.8	-45 20	10.2	9.6	Ao	2	..	18300b
15	2472	14.6	- 9 29	8.0	8.0	Ao	4	..	20896b	65	3671	14.8	-48 54	10.2	9.8	A <sub>3</sub>	2	..	24598b
16	2477	14.6	-13 39	9.3	9.4	A <sub>2</sub>	3	..	20896b	66	3483	14.8	-50 1	9.4	10.0	G <sub>5</sub>	2	..	24598b
17	2471	14.6	-14 33	9.0	10.0	Ko	1	..	20857b	67	1575	14.8	-54 37	9.0	9.2	Go	6	..	24598b
18	2276	14.6	-18 44	9.7	10.0	Fo	2	..	20857b	68	1462	14.8	-57 9	9.0	9.5	Ko	2	..	40088b
19	5809	14.6	-28 39	9.0	8.6	A <sub>2</sub>	4	..	4008ob	69	1463	14.8	-57 19	9.5	9.8	Fo	2	..	40088b
20	6021	14.6	-30 35	10.3	9.5	Fo	2	..	4008ob	70	145	14.8	-85 40	9.8	10.9	K <sub>2</sub>	1	..	22238b
21	5115	14.6	-32 7	8.6	9.0	G <sub>5</sub>	1	..	4008ob	71	1810	14.9	+43 39	8.7	8.8	A <sub>5</sub>	3	..	37704i
22	4526	14.6	-37 38	9.3	8.3	B8	3	..	13054b	72	1958	14.9	+ 3 5	var.	var.	Nb	..	R	M
23	3964	14.6	-41 8	10.3	9.7	Ao	2	..	18289b	73	2307	14.9	- 8 36	9.3	10.3	Ko	2	..	21394b
24	3965	14.6	-41 48	8.9	8.5	B8	4	..	18289b	74	2317	14.9	-11 17	8.6	9.6	Ko	3	..	20896b
25	4017	14.6	-46 42	9.4	10.2	K <sub>5</sub>	1	..	18300b	75	2355	14.9	-19 51	6.72	6.2	Ao	8	..	11036b
26	1572	14.6	-54 27	9.7	9.8	A <sub>3</sub>	2	..	24598b	76	2376	14.9	-21 42	9.0	9.2	Go	2	..	46182b
27	840	14.6	-64 11	9.0	9.5	F8	2	..	40095b	77	7123	14.9	-23 49	11.0	10.0	K <sub>2</sub>	1	..	44434b
28	628	14.7	+65 48	7.77	8.77	Ko	4	..	37713i	78	5933	14.9	-29 27	9.3	8.4	B8	4	..	4008ob
29	2090	14.7	+39 12	8.3	9.3	Ko	2	..	37390i	79	5936	14.9	-29 51	9.0	9.5	Ko	3	..	4008ob
30	1903	14.7	+25 39	7.35	8.42	K <sub>2</sub>	5	2,6	38635i	80	4284	14.9	-38 27	8.6	7.9	B8	4	..	13054b
31	1982	14.7	+19 34	9.1	10.1	Ko	2	..	37605i	81	4203	14.9	-40 3	8.80	9.1	G <sub>5</sub>	4	..	24747b
32	1936	14.7	+ 5 26	8.3	8.8	F8	2	7,1 R	20710b	82	3969	14.9	-42 0	10.6	10.3	B <sub>9</sub>	1	..	18289b
33	2270	14.7	+ 0 44	8.24	9.24	Ko	1	..	38271i	83	4152	14.9	-43 24	9.1	9.6	Ko	3	0,1	24747b
34	2301	14.7	- 3 49	8.0	8.5	F8	6	..	21394b	84	4025	14.9	-46 47	7.3	7.5	B <sub>5</sub>	6	..	8952b
35	2556	14.7	- 7 1	8.4	9.4	Ko	5	..	21394b	85	1608	14.9	-54 3	9.6	10.1	F8	2	..	24598b
36	2305	14.7	- 8 13	9.0	10.1	K <sub>2</sub>	2	..	21394b	86	1577	14.9	-54 11	8.9	9.0	F <sub>5</sub>	7	..	24598b
37	2306	14.7	- 8 17	9.3	9.7	F <sub>5</sub>	2	..	21394b	87	1290	15.0	+56 48	9.0	9.6	Go	2	..	37409i
38	2315	14.7	-11 34	8.0	8.4	F <sub>5</sub>	7	..	20896b	88	1807	15.0	+34 39	8.5	9.3	G <sub>5</sub>	2	..	38611i
39	2395	14.7	-16 32	8.4	8.4	B <sub>9</sub>	6	..	20857b	89	1806	15.0	+34 12	8.7	9.7	Ko	2	..	38218i
40	2277	14.7	-18 9	8.0	9.4	Ma	3	..	20857b	90	1594	15.0	+27 41	8.7	8.8	A <sub>3</sub>	3	..	38218i
41	2375	14.7	-21 55	9.3	9.2	Ao	3	0,2	46182b	91	1985	15.0	+19 36	9.5	9.5	A	2	..	37605i
42	4078	14.7	-40 57	8.6	9.5	Ko	3	..	18289b	92	1934	15.0	+ 9 44	6.97	8.04	K <sub>2</sub>	3	..	38156i
43	3967	14.7	-41 50	9.9	9.4	Ao	2	..	18289b	93	2032	15.0	+ 8 20	7.55	8.55	Ko	1	..	38156i
44	4099	14.7	-42 22	10.9	9.7	G <sub>5</sub>	2	..	18289b	94	2306	15.0	- 3 27	9.2	10.4	K <sub>5</sub>	1	..	21394b
45	4022	14.7	-46 46	11.5	9.3	Ao	2	..	18300b	95	2557	15.0	- 6 57	10.2	10.3	A <sub>2</sub>	1	..	21394b
46	3670	14.7	-48 50	9.8	9.5	G <sub>5</sub>	4	..	24598b	96	2462	15.0	-12 30	9.0	9.5	F8	1	..	20896b
47	1433	14.7	-52 49	9.1	9.2	A <sub>2</sub>	6	..	24598b	97	7126	15.0	-23 29	7.8	8.6	K <sub>5</sub>	3	..	18302b
48	1574	14.7	-54 49	9.7	9.8	A <sub>2</sub>	3	..	24598b	98	5854	15.0	-26 29	8.4	9.2	Ko	2	..	4008ob
49	872	14.7	-69 19	7.9	7.9	Ao	4	..	8913b	99	5853	15.0	-26 38	8.8	8.6	B <sub>3</sub>	4	..	4008ob
50	1045	14.8	+61 47	8.6	9.4	G <sub>5</sub>	2	..	37676i	100	4285	15.0	-38 22	7.8	7.2	A <sub>2</sub>	7	..	13054b

## THE HENRY DRAPER CATALOGUE.

70100

8<sup>h</sup> 15<sup>m</sup>.0

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	3978	15.0	-45 20	10.2	9.4	Ao	3	..	18300b	51	2444	15.3	-17 48	9.2	9.3	A3	3	..	20857b
2	842	15.0	-64 12	9.0	9.0	Ao	3	..	13025b	52	2359	15.3	-19 48	9.2	9.5	K5	2	..	20857b
3	747	15.0	-70 31	8.2	9.4	K5	1	..	19155b	53	6797	15.3	-24 37	10.3	9.3	Ao	1	..	44434b
4	250	15.0	-81 19	8.45	9.9	K5	2	..	20869b	54	5856	15.3	-26 14	10.3	9.2	B9	3	..	40080b
5	1635	15.1	+48 40	8.4	9.6	K5	1	..	38188i	55	5307	15.3	-27 14	9.8	9.2	Ao	2	..	40080b
6	1722	15.1	+32 48	8.1	9.3	K5	1	..	38218i	56	5133	15.3	-32 48	7.9	8.1	B5	5	..	12788b
7	1820	15.1	+21 34	9.1	9.1	Ao	3	..	37605i	57	4294	15.3	-38 46	6.85	6.8	Ao	6	..	8897b
8	1776	15.1	+10 50	9.1	9.1	Ao	1	..	38156i	58	4091	15.3	-40 16	9.7	9.2	F2	4	..	24747b
9	1932	15.1	+5 59	9.1	9.1	Ao	2	..	20710b	59	4089	15.3	-40 45	8.7	8.9	A2	2	..	13064b
10	1966	15.1	-0 36	6.30	6.86	Go	7	..	38271i	60	4088	15.3	-40 59	9.3	9.1	Ao	4	2,1	24747b
11	2529	15.1	-2 28	8.2	9.3	K2	1	3,1	38207i	61	3974	15.3	-41 31	9.0	9.2	K2	3	2,1	18289b
12	2496	15.1	-5 20	10.2	10.3	A2	2	..	21394b	62	4033	15.3	-46 31	10.0	9.9	Ko	1	..	18300b
13	2378	15.1	-15 12	8.51	9.29	G5	3	..	20857b	63	1498	15.3	-55 28	6.3	7.7	Ko	7	..	24598b
14	2357	15.1	-19 20	9.7	9.2	G5	1	..	20857b	64	1499	15.3	-55 35	6.7	8.0	Ko	7	..	24598b
15	2488	15.1	-20 56	8.0	8.9	K5	4	..	18302b	65	1098	15.3	-60 28	8.9	10.1	Ko	3	..	40088b
16	2228	15.1	-22 33	9.3	9.2	F5	2	..	18302b	66	629	15.4	+65 13	8.6	9.2	Go	3	..	37713i
17	5300	15.1	-27 33	9.8	9.7	K	1	..	40080b	67	2531	15.4	-2 19	8.8	9.2	F5	2	..	38207i
18	4830	15.1	-33 44	8.7	8.9	A2	3	0,2	13054b	68	2436	15.4	-7 13	9.3	9.7	F5	3	..	21394b
19	4209	15.1	-40 1	8.05	8.2	Ko	5	..	24747b	69	2311	15.4	-8 25	9.1	9.4	F2	4	..	21394b
20	4084	15.1	-40 6	8.30	7.9	B9	4	..	13054b	70	2474	15.4	-14 17	8.1	8.4	F2	5	..	20857b
21	4104	15.1	-42 26	10.9	9.7	Ao	2	..	18289b	71	5860	15.4	-26 23	9.6	9.3	Go	2	..	40080b
22	4156	15.1	-43 57	9.2	9.0	B8	2	..	24747b	72	3978	15.4	-41 34	10.3	9.2	Ao	3	0,2	18289b
23	3981	15.1	-45 30	10.5	9.9	Ao	2	..	18300b	73	4278	15.4	-44 21	10.5	9.6	Ao	2	..	24747b
24	3982	15.1	-45 45	10.0	9.3	A2	3	..	18300b	74	1469	15.4	-57 35	9.0	9.8	G5	2	..	40088b
25	4030	15.1	-46 57	9.4	9.1	Fo	4	..	18300b	75	1093	15.4	-58 23	6.8	7.1	B9	9	..	40088b
26	1575	15.1	-56 42	9.7	9.8	A2	2	..	40088b	76	179	15.5	+84 47	8.58	9.14	Go	4	..	37546i
27	1464	15.1	-57 11	9.1	9.2	Fo	3	..	40088b	77	996	15.5	+62 37	7.8	7.8	B9	5	..	37676i
28	1097	15.1	-60 15	8.11	9.6	Ma	5	..	40088b	78	1739	15.5	+29 7	8.5	9.3	G5	2	..	38218i
29	364	15.1	-77 48	9.4	9.4	Ao	5	..	22237b	79	1917	15.5	+18 11	8.55	8.55	Ao	5	..	37605i
30	272	15.2	+79 44	8.90	8.90	A	2	..	37493i	80	1961	15.5	+7 8	9.1	10.1	Ko	3	..	20710b
31	1729	15.2	+49 48	7.97	8.97	Ko	2	..	38188i	81	1960	15.5	+2 59	7.8	8.1	F2	6	..	38271i
32	1766	15.2	+26 39	8.8	9.2	F5	3	..	38635i	82	2304	15.5	-4 16	9.2	9.6	F5	2	..	21394b
33	1823	15.2	+17 16	8.76	9.76	Ko	2	..	37605i	83	2560	15.5	-6 19	7.34	8.41	K2	7	..	21394b
34	2011	15.2	-1 16	8.8	8.9	A3	1	..	38207i	84	2480	15.5	-11 0	9.2	9.3	A3	2	..	20896b
35	2308	15.2	-3 34	9.3	10.3	Ko	1	..	21394b	85	2361	15.5	-19 45	10.2	9.8	A	1	..	20857b
36	2463	15.2	-12 32	6.96	8.03	K2	7	..	20896b	86	5897	15.5	-25 7	8.05	8.9	K5	4	..	40080b
37	2379	15.2	-15 58	8.8	8.9	A2	2	..	20857b	87	5862	15.5	-26 18	10.3	10.0	A	1	..	40080b
38	2442	15.2	-17 57	9.3	..	R5	2	..	20857b	88	5865	15.5	-26 46	7.13	8.6	Ko	7	..	40080b
39	7129	15.2	-23 54	10.8	9.2	Ao	3	0,2	44434b	89	5311	15.5	-28 3	9.8	8.4	B8	4	..	40080b
40	6794	15.2	-24 24	10.3	9.2	Ao	2	..	44434b	90	5138	15.5	-32 43	9.3	8.7	A2	3	..	12788b
41	3983	15.2	-45 42	10.2	9.6	A3	2	..	18300b	91	5139	15.5	-33 3	7.9	8.3	A2	5	0,5	12788b
42	4032	15.2	-46 50	8.8	7.8	F2	7	..	18300b	92	4474	15.5	-35 36	9.9	9.0	Ao	3	0,2	13054b
43	3676	15.2	-48 41	10.9	10.0	A2	2	..	24598b	93	4546	15.5	-37 52	7.9	7.4	Ao	6	..	13054b
44	1799	15.3	+36 23	8.8	8.9	A5	3	..	38611i	94	4094	15.5	-40 32	8.4	9.2	Ko	1	..	13064b
45	1808	15.3	+34 15	7.25	8.25	Ko	5	..	38218i	95	4113	15.5	-42 13	6.9	7.9	Ko	6	0,5	39914b
46	1914	15.3	+22 21	8.1	8.9	G5	5	..	37605i	96	4112	15.5	-42 27	9.4	9.1	Fo	2	..	39914b
47	1959	15.3	+3 26	8.8	9.8	K	1	..	38271i	97	4160	15.5	-43 58	9.8	9.6	Ao	3	..	24747b
48	2303	15.3	-5 1	6.24	7.31	K2	6	..	38207i	98	4281	15.5	-44 16	10.5	9.6	Ao	2	..	24747b
49	2476	15.3	-10 1	8.61	8.67	A2	3	..	20896b	99	1002	15.5	-61 21	9.4	10.4	K	1	..	40088b
50	2477	15.3	-11 1	9.0	9.8	G5	1	..	20896b	100	922	15.5	-63 53	6.84	6.7	B9	8	1,8	8913b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

70200

8<sup>h</sup> 15<sup>m</sup>.5

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	843	15.5	-64 6	7.9	7.9	Ao	4	1,5	8913b	51	4040	15.8	-46 54	7.5	7.5	B8	6	..	8952b
2	548	15.6	+66 38	8.6	8.7	A2	3	..	37713i	52	1501	15.8	-55 17	9.4	9.8	F5	2	..	24598b
3	1273	15.6	+54 55	7.86	8.64	G5	3	0,3	38188i	53	1137	15.9	+57 44	8.0	8.3	F2	6	..	37676i
4	1915	15.6	+22 14	7.40	8.40	Ko	7	..	37605i	54	2311	15.9	- 3 37	10.3	10.4	A5	1	..	21394b
5	1916	15.6	+21 56	8.8	8.9	A5	3	..	38635i	55	2309	15.9	- 4 33	7.8	7.9	A3	6	..	38207i
6	1935	15.6	+ 6 51	9.1	9.4	Fo	3	..	20710b	56	2488	15.9	-13 19	8.2	9.2	Ko	5	..	20896b
7	1936	15.6	+ 6 48	9.1	9.1	Ao	4	..	20710b	57	2364	15.9	-19 46	8.8	8.9	G5	4	..	20857b
8	2070	15.6	+ 1 44	8.2	8.6	F5	2	..	38271i	58	2231	15.9	-23 2	8.0	7.4	Ao	6	..	11036b
9	2305	15.6	- 4 30	8.4	9.0	Go	6	E	21394b	59	7145	15.9	-23 29	8.8	8.0	Ao	6	..	18302b
10	2561	15.6	- 6 11	8.0	9.1	K2	4	..	21394b	60	6807	15.9	-24 9	9.1	8.4	A2	5	..	18302b
11	2437	15.6	- 7 41	9.7	10.3	Go	2	..	21394b	61	5908	15.9	-25 18	9.8	8.6	Ao	5	..	40080b
12	5317	15.6	-27 53	10.8	9.3	A2	2	..	40080b	62	5879	15.9	-26 41	10.1	9.3	Go	1	..	40080b
13	5957	15.6	-29 52	8.0	8.0	B5	6	3,2	40080b	63	4854	15.9	-33 17	9.3	8.6	Ao	2	1,2	13054b
14	5881	15.6	-31 50	9.3	8.9	Ao	4	..	40080b	64	3997	15.9	-45 54	7.3	8.4	Ko	7	..	18300b
15	4844	15.6	-33 25	7.9	9.2	K5	1	0,1	12788b	65	1435	15.9	-52 24	7.9	7.8	Ao	3	..	8952b
16	3982	15.6	-41 13	9.5	9.4	F8	3	..	24747b	66	1611	15.9	-54 3	9.7	10.1	F5	2	..	24598b
17	3981	15.6	-41 41	9.5	8.3	B9	4	0,4	13064b	67	1095	15.9	-58 52	6.42	7.2	F8	10	..	40088b
18	4282	15.6	-44 43	7.5	7.8	Ao	4	0,10	13038b	68	1096	15.9	-58 52	9.5	9.5	A	1	..	40088b
19	3991	15.6	-45 36	9.2	9.0	B8	3	..	18300b	69	992	15.9	-62 33	8.9	9.2	Fo	2	..	13025b
20	3989	15.6	-45 45	8.8	9.0	Ko	5	..	18300b	70	488	15.9	-73 30	6.65	6.7	A5	6	0,10	9004b
21	4036	15.6	-46 38	10.0	10.2	Ko	2	..	18300b	71	1570	16.0	+45 46	8.6	9.4	G5	3	..	37704i
22	1413	15.7	+51 16	9.2	10.0	G5	1	..	38188i	72	1815	16.0	+43 31	4.43	5.61	K5	..	3,10	56,85
23	1568	15.7	+45 40	8.10	9.10	Ko	4	..	37704i	73	2037	16.0	+40 46	7.00	7.28	Fo	8	..	37704i
24	1801	15.7	+36 27	8.7	9.5	G5	2	..	38611i	74	1913	16.0	+24 21	8.7	9.0	F2	3	..	38635i
25	1597	15.7	+27 46	8.9	9.2	F	1	..	38218i	75	1939	16.0	+23 17	8.3	8.4	A2	5	..	37605i
26	1942	15.7	+ 2 48	8.6	8.7	A2	1	..	38271i	76	1825	16.0	+17 36	var.	var.	Md	..	R	M
27	2306	15.7	- 4 51	8.4	8.5	A2	3	..	38207i	77	1899	16.0	+13 9	8.2	9.3	K2	2	..	38960i
28	2478	15.7	- 9 22	9.2	10.2	Ko	1	..	21394b	78	1965	16.0	+ 7 44	8.8	10.0	K5	1	..	20710b
29	2484	15.7	-13 37	9.3	9.4	A2	4	..	20896b	79	1941	16.0	+ 5 30	8.4	8.5	A3	2	..	38271i
30	2382	15.7	-15 16	9.35	9.77	F5	1	..	20857b	80	1957	16.0	+ 4 42	7.95	8.01	A2	5	..	38271i
31	2363	15.7	-19 26	8.8	9.2	G5	3	..	20857b	81	2314	16.0	- 4 6	8.5	9.5	Ko	3	..	21394b
32	2362	15.7	-19 57	9.2	8.9	Fo	4	..	20857b	82	2501	16.0	- 5 12	9.5	10.1	Go	2	..	21394b
33	5851	15.7	-28 5	8.4	8.1	A3	5	..	40080b	83	2502	16.0	- 5 54	9.0	10.1	K2	2	..	21394b
34	5883	15.7	-31 31	8.8	8.7	B8	4	..	40080b	84	2453	16.0	-17 31	9.5	9.5	Ao	2	..	20857b
35	4627	15.7	-34 17	6.38	6.5	B9	6	1,9	8897b	85	5882	16.0	-26 53	9.8	8.6	Ao	5	..	40080b
36	4096	15.7	-40 9	10.6	9.7	Ao	2	..	24747b	86	5327	16.0	-27 7	9.8	9.2	A2	3	..	40080b
37	3983	15.7	-41 11	9.9	9.7	Go	1	..	24747b	87	5326	16.0	-27 51	9.0	8.6	B8	4	..	40080b
38	3794	15.7	-47 27	8.3	8.1	Ao	2	..	8952b	88	4632	16.0	-35 0	8.20	7.1	Ao	7	..	13054b
39	3682	15.7	-48 36	10.0	10.1	G5	2	..	24598b	89	4555	16.0	-37 7	6.88	6.7	Fo	5	..	8897b
40	2939	15.7	-52 1	10.2	10.4	Ko	2	..	24598b	90	4224	16.0	-40 3	9.55	9.4	Ao	3	..	24747b
41	1099	15.7	-60 25	9.8	10.1	Fo	2	..	40088b	91	4103	16.0	-40 8	8.15	8.0	Fo	2	..	8897b
42	1802	15.8	+15 18	9.1	9.4	F2	1	..	38960i	92	3987	16.0	-41 15	10.1	9.7	Ao	3	..	24747b
43	2071	15.8	+ 1 26	8.4	8.7	Fo	2	..	38271i	93	3688	16.0	-48 5	10.5	9.3	B9	2	..	39930b
44	2563	15.8	- 6 59	9.2	9.5	F2	6	..	21394b	94	1003	16.0	-61 9	8.5	10.1	K2	2	..	40088b
45	7143	15.8	-23 9	7.15	8.1	K5	4	..	18302b	95	1245	16.1	+53 19	8.9	9.9	Ko	3	..	38188i
46	5904	15.8	-25 11	8.45	8.6	A3	5	..	40080b	96	1416	16.1	+51 0	8.6	9.6	Ko	1	..	38188i
47	5874	15.8	-26 43	9.3	8.9	Ao	4	..	40080b	97	1991	16.1	+19 48	8.65	8.79	A5	4	..	37605i
48	5857	15.8	-29 2	8.0	8.7	Ma	3	..	40080b	98	2074	16.1	+ 1 23	7.6	7.9	F2	6	..	38271i
49	4853	15.8	-33 28	9.9	8.9	Ao	1	..	12788b	99	2315	16.1	- 3 58	9.2	10.4	K5	2	..	21394b
50	4166	15.8	-43 40	9.0	8.7	Ao	3	0,3	13064b	100	2491	16.1	-14 3	7.44	7.52	A3	7	..	20857b



## THE HENRY DRAPER CATALOGUE.

70300

8<sup>h</sup> 16<sup>m</sup>.1

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	2455	16.1	-17 40	9.3	9.3	Ao	3	..	20857b	51	330	16.4	+77 23	7.7	8.0	Fo	5	..	37493i
2	2233	16.1	-22 37	6.09	7.7	Ko	7	..	11036b	52	550	16.4	+66 49	8.9	9.9	Ko	2	..	37713i
3	6811	16.1	-24 7	9.6	8.3	B8	3	..	18302b	53	1303	16.4	+51 52	8.6	9.0	F5	4	..	38188i
4	5866	16.1	-28 26	10.3	9.2	A5	2	..	40080b	54	1638	16.4	+48 12	8.6	9.0	F5	2	..	37704i
5	6064	16.1	-30 47	7.11	8.6	Ko	7	..	40080b	55	1943	16.4	+5 7	8.8	8.9	A2	3	..	20710b
6	4479	16.1	-36 53	8.6	7.7	B8	4	..	13054b	56	1960	16.4	+4 45	9.15	9.15	Ao	1	..	38271i
7	3990	16.1	-41 42	8.9	8.6	B9	5	0.4	13064b	57	2443	16.4	-7 27	9.1	10.1	Ko	3	..	21394b
8	3989	16.1	-42 4	9.3	8.6	Ao	3	0.3	13064b	58	2444	16.4	-7 45	7.32	8.32	Ko	8	..	21394b
9	3799	16.1	-47 53	6.60	7.2	B3	8	..	8952b	59	2404	16.4	-17 2	8.0	9.2	K5	2	..	20857b
10	488	16.1	-75 52	9.4	9.4	Ao	3	..	22237b	60	7158	16.4	-23 19	9.8	8.3	A2	3	..	18302b
11	510	16.2	+70 27	7.49	8.27	G5	5	..	37713i	61	7157	16.4	-23 47	8.4	8.4	Ko	2	..	18302b
12	632	16.2	+65 3	7.50	7.92	F5	6	..	37713i	62	5338	16.4	-28 5	9.8	8.9	Ao	3	..	40080b
13	1246	16.2	+53 33	5.58	5.64	A2	10	..	38188i	63	5915	16.4	-31 42	8.8	8.7	B9	4	..	40080b
14	1415	16.2	+51 33	8.8	9.8	K	1	..	38188i	64	4106	16.4	-41 1	9.7	9.7	F5	3	..	24747b
15	1571	16.2	+47 20	8.1	9.1	Ko	3	..	37704i	65	3994	16.4	-41 19	9.9	10.3	A3	3	..	24747b
16	1768	16.2	+26 14	8.6	9.4	G5	2	..	38635i	66	3995	16.4	-41 29	9.7	9.4	Ao	2	..	13064b
17	1940	16.2	+23 25	8.7	9.7	Ko	1	..	38635i	67	4131	16.4	-42 25	8.2	8.6	Ko	2	2,2	39914b
18	1923	16.2	+17 56	8.15	8.23	A3	5	R	37605i	68	4045	16.4	-46 8	9.0	8.5	F2	6	..	18300b
19	1878	16.2	+14 39	7.89	8.89	Ko	1	..	38156i	69	1438	16.4	-52 15	9.5	10.1	Go	2	..	24598b
20	2310	16.2	-4 14	8.8	9.1	Fo	4	..	21394b	70	1505	16.4	-55 10	9.23	9.2	F5	4	..	24598b
21	2442	16.2	-7 52	9.3	9.6	Fo	2	..	21394b	71	1583	16.4	-56 39	9.5	9.5	B9	2	..	40088b
22	2389	16.2	-21 25	8.4	8.4	F5	4	..	18302b	72	275	16.4	-79 27	9.8	9.9	A3	4	..	22237b
23	5913	16.2	-25 31	8.0	8.1	F5	8	..	40080b	73	1807	16.5	+15 46	8.9	9.0	A2	3	..	38960i
24	5883	16.2	-26 32	9.1	8.9	A3	4	..	40080b	74	1781	16.5	+10 24	8.0	8.8	G5	2	..	38156i
25	5976	16.2	-29 14	7.5	7.3	Ao	6	1,9 R	43040b	75	2504	16.5	-5 11	9.20	10.20	Ko	2	..	21394b
26	4637	16.2	-34 7	9.3	9.2	G5	1	R	12788b	76	2459	16.5	-17 47	9.9	9.9	A	1	R	20857b
27	4481	16.2	-36 17	8.3	7.0	Ao	4	..	8897b	77	2291	16.5	-18 36	9.0	9.0	Ao	5	..	20857b
28	4293	16.2	-44 5	10.2	9.6	F5	2	..	24747b	78	2292	16.5	-18 46	9.2	9.3	A3	4	..	20857b
29	3999	16.2	-45 13	9.36	9.9	K5	1	..	18300b	79	2290	16.5	-18 56	9.0	9.8	G5	2	..	20857b
30	4000	16.2	-45 27	9.8	9.8	G5	3	..	18300b	80	5891	16.5	-26 32	8.8	8.6	Fo	6	..	40080b
31	3803	16.2	-47 45	9.1	8.1	B9	3	..	39930b	81	3997	16.5	-42 4	10.8	9.7	Ao	2	..	18289b
32	3492	16.2	-49 58	9.36	9.2	Fo	5	..	24598b	82	3813	16.5	-47 36	9.6	9.0	Ao	2	..	39930b
33	1017	16.2	-60 0	7.72	7.3	B9	6	0.9	8913b	83	3264	16.5	-50 23	8.5	8.6	A2	7	..	24598b
34	903	16.2	-65 21	9.2	9.5	Fo	4	..	19155b	84	1585	16.5	-56 58	10.0	10.0	A	1	..	40088b
35	1637	16.3	+48 24	8.0	8.1	A2	5	..	37704i	85	1018	16.5	-60 0	8.07	8.9	Ko	5	..	40088b
36	2066	16.3	+20 18	7.40	8.40	Ko	5	..	37605i	86	1572	16.6	+47 8	8.4	9.2	G5	2	..	37704i
37	1805	16.3	+15 5	7.49	8.49	Ko	4	..	37605i	87	2317	16.6	-4 8	9.2	9.7	F8	3	..	21394b
38	1879	16.3	+13 57	7.08	7.14	A2	4	..	38156i	88	2505	16.6	-5 42	9.3	9.6	Fo	3	..	21394b
39	1958	16.3	+3 58	8.0	8.3	F2	3	..	38271i	89	2498	16.6	-13 51	9.0	9.0	Ao	5	..	20896b
40	2017	16.3	-1 17	6.35	6.35	Ao	8	..	38271i	90	2389	16.6	-15 16	9.5	9.6	A3	1	..	20857b
41	2315	16.3	-8 33	7.76	8.76	Ko	5	..	21394b	91	2392	16.6	-22 7	8.2	8.0	A3	2	..	11036b
42	2388	16.3	-15 12	8.26	8.54	Fo	6	..	20857b	92	7165	16.6	-23 11	10.8	9.5	Ao	2	..	46182b
43	2287	16.3	-18 57	8.6	9.0	F5	6	..	20857b	93	6822	16.6	-24 50	8.2	8.3	Ao	5	0.2	18302b
44	7152	16.3	-23 35	10.3	8.9	Ao	2	..	18302b	94	5341	16.6	-27 19	10.3	9.2	Go	2	..	40080b
45	7155	16.3	-23 43	11.5	8.7	B9	2	..	18302b	95	4646	16.6	-34 9	8.6	8.6	G	1	..	12788b
46	7153	16.3	-23 58	9.3	8.3	B9	3	..	18302b	96	1581	16.6	-54 14	8.2	9.7	K5	4	..	24598b
47	5917	16.3	-25 48	9.6	8.6	A2	5	..	40080b	97	1586	16.6	-56 55	9.1	9.4	Ao	2	..	40088b
48	3805	16.3	-47 52	9.0	8.2	B9	4	..	39930b	98	877	16.6	-69 56	8.7	9.1	F5	2	3,2	21452b
49	818	16.3	-67 3	8.8	9.8	Ko	2	..	19155b	99	467	16.7	+68 56	8.8	9.2	F5	3	..	37713i
50	751	16.3	-70 6	8.2	8.5	Fo	3	..	24527b	100	1814	16.7	+35 49	8.7	9.7	Ko	2	..	38611i



## ANNALS OF HARVARD COLLEGE OBSERVATORY.

70400

8<sup>h</sup> 16<sup>m</sup>.7

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1724	16.7	+31 56	7.7	8.5	G5	2	..	38218i	51	3821	16.9	-47 22	8.4	8.2	B9	2	..	8952b
2	1599	16.7	+27 51	7.7	8.5	G5	2	..	38218i	52	1590	16.9	-56 28	9.4	9.4	B9	2	..	40088b
3	1770	16.7	+26 3	8.3	9.3	Ko	2	..	38635i	53	1019	16.9	-59 14	9.8	9.8	Ao	2	..	40088b
4	1943	16.7	+ 8 54	9.1	9.4	F2	2	..	20710b	54	878	16.9	-69 28	9.4	9.5	A2	2	..	19155b
5	2037	16.7	+ 7 58	8.5	8.9	F5	4	..	20710b	55	1601	17.0	+27 25	8.6	9.7	K2	1	..	38218i
6	2506	16.7	- 6 6	9.2	10.2	Ko	1	..	21394b	56	1824	17.0	+10 59	7.8	8.8	Ko	1	..	38156i
7	2446	16.7	- 7 52	8.0	9.0	Ko	7	..	21394b	57	1941	17.0	+ 6 19	9.1	10.2	K2	1	..	20710b
8	2484	16.7	- 9 32	9.2	10.0	G5	2	..	21394b	58	1948	17.0	+ 2 28	6.92	8.10	K5	6	..	38271i
9	2483	16.7	-14 39	7.03	8.03	Ko	8	..	20896b	59	2485	17.0	- 9 39	8.06	9.13	K2	3	..	20896b
10	2405	16.7	-16 41	8.4	9.5	K2	3	..	20857b	60	2327	17.0	-11 31	9.9	9.9	Ao	1	..	20896b
11	2461	16.7	-17 25	9.0	9.1	A2	2	..	20857b	61	5940	17.0	-26 2	9.6	8.6	B5	6	..	40080b
12	2495	16.7	-20 54	9.5	9.2	Ao	1	..	18302b	62	6094	17.0	-30 16	8.8	9.5	K5	1	..	40080b
13	5343	16.7	-27 33	11.0	9.2	A2	2	..	40080b	63	4137	17.0	-42 43	9.8	9.4	F5	5	..	24747b
14	3495	16.7	-49 14	7.3	7.8	Ko	2	0.8	8952b	64	3826	17.0	-47 21	8.5	8.2	B9	2	..	8952b
15	1588	16.7	-56 51	8.9	8.9	F5	3	..	40088b	65	3825	17.0	-48 5	9.0	8.2	B9	3	..	39930b
16	1005	16.7	-61 32	9.1	9.5	Ao	3	..	40088b	66	1479	17.0	-57 29	9.6	9.7	A3	2	..	40088b
17	239	16.7	-80 17	9.2	10.4	K5	1	..	22237b	67	1020	17.0	-59 51	9.1	9.9	G5	2	..	40088b
18	132	16.7	-86 19	8.8	10.0	K5	3	..	15145b	68	1021	17.0	-59 53	9.0	9.6	Go	3	..	40088b
19	1130	16.8	+59 55	9.26	9.54	F	1	..	37676i	69	490	17.0	-73 55	8.8	8.8	Ao	4	..	22237b
20	1535	16.8	+50 29	8.6	9.1	F8	2	..	38188i	70	287	17.1	+78 33	7.14	7.92	G5	6	..	37714i
21	1808	16.8	+15 19	var.	var.	Mc	..	R	M	71	532	17.1	+68 31	8.6	9.2	Go	3	..	37713i
22	2319	16.8	- 8 21	7.02	7.08	A2	10	..	21394b	72	1926	17.1	+17 57	8.22	8.64	F5	4	..	37605i
23	5885	16.8	-28 19	10.1	9.2	G5	1	..	40080b	73	1949	17.1	+ 5 41	8.4	8.9	F8	3	..	20710b
24	4007	16.8	-41 45	7.2	8.5	Ko	7	0.4	18289b	74	1949	17.1	+ 2 2	8.4	8.5	A2	2	..	38271i
25	3496	16.8	-49 23	9.8	9.8	Fo	2	..	24598b	75	1973	17.1	- 0 16	8.98	9.40	F5	1	..	22751b
26	3266	16.8	-50 21	9.4	9.6	G5	2	..	24598b	76	2315	17.1	- 4 47	9.2	10.2	Ko	1	..	21394b
27	2948	16.8	-52 1	10.2	9.5	B5	4	..	24598b	77	2328	17.1	-11 56	9.5	9.6	A2	2	..	19015b
28	1098	16.8	-58 19	8.8	10.1	Ko	1	..	40088b	78	2500	17.1	-14 7	9.2	9.2	Ao	2	..	20896b
29	1097	16.8	-58 24	8.9	9.5	A2	2	..	40088b	79	2501	17.1	-14 7	8.4	8.4	Ao	7	..	20896b
30	847	16.8	-65 1	9.09	9.8	K2	2	..	21452b	80	2410	17.1	-16 26	8.7	9.8	K2	1	..	20857b
31	905	16.8	-65 18	8.9	9.3	F5	4	..	19155b	81	2462	17.1	-18 2	9.2	9.3	A2	1	..	20857b
32	1826	16.9	+41 0	8.4	9.2	G5	2	..	37390i	82	2499	17.1	-20 28	7.14	7.7	Ao	7	..	11036b
33	1704	16.9	+16 29	6.72	7.72	Ko	7	..	37605i	83	5944	17.1	-25 8	8.40	9.0	Ko	2	..	18302b
34	1947	16.9	+ 2 46	8.4	9.5	K2	3	..	38271i	84	5912	17.1	-26 55	10.8	9.5	A2	2	..	40080b
35	2275	16.9	+ 0 10	7.48	8.26	G5	3	..	38271i	85	4504	17.1	-36 54	9.9	8.6	Ao	2	..	13054b
36	2542	16.9	- 2 36	9.0	9.1	A2	4	1.3	22751b	86	4333	17.1	-38 50	8.9	9.2	Ao	3	..	24747b
37	2448	16.9	- 8 5	9.0	9.5	F8	3	..	21394b	87	4062	17.1	-47 5	9.1	9.0	Ao	2	..	39930b
38	2490	16.9	-10 43	6.90	7.18	Fo	10	..	20896b	88	3707	17.1	-48 13	10.0	9.5	A5	1	..	39930b
39	2485	16.9	-14 28	9.2	10.2	Ko	1	..	20896b	89	1439	17.1	-52 24	9.8	10.1	Fo	2	..	24598b
40	2297	16.9	-19 4	9.2	9.2	F5	3	..	20857b	90	240	17.1	-80 10	9.86	10.1	Ao	2	..	20869b
41	2368	16.9	-19 14	8.6	8.3	F5	7	..	20857b	91	1575	17.2	+45 5	8.6	9.2	Go	3	..	37704i
42	2369	16.9	-19 46	5.56	6.2	Go	8	R	11036b	92	2070	17.2	+20 20	9.1	9.5	F5	2	..	37605i
43	5350	16.9	-27 43	11.3	9.5	A	1	..	40080b	93	1968	17.2	+ 7 3	8.4	9.5	K2	3	..	20710b
44	5173	16.9	-32 28	8.6	8.7	Ko	2	..	12788b	94	1950	17.2	+ 5 21	7.46	8.64	K5	3	..	38271i
45	4879	16.9	-33 47	9.3	8.9	B9	2	..	12788b	95	2509	17.2	- 5 22	9.9	9.9	Ao	2	..	21394b
46	4112	16.9	-40 19	10.3	9.7	Ao	3	..	24747b	96	2567	17.2	- 6 12	9.7	9.8	A2	3	..	21394b
47	4187	16.9	-43 34	9.4	9.4	B9	4	..	24747b	97	2566	17.2	- 6 30	8.6	8.6	Ao	7	..	21394b
48	4014	16.9	-45 58	9.8	9.0	Ao	5	..	18300b	98	2450	17.2	- 7 8	9.5	9.8	Fo	3	..	21394b
49	3823	16.9	-47 7	8.6	8.5	Fo	4	..	39930b	99	2491	17.2	-10 26	6.70	7.04	F2	10	..	20896b
50										100	7180	17.2	-23 36	8.8	8.3	A3	5	..	18302b

THE HENRY DRAPER CATALOGUE.

70500

8<sup>h</sup> 17<sup>m</sup>.2

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	5946	17.2	-25 30	10.3	9.5	Go	1	..	44434b	51	2493	17.5	-10 23	9.1	9.6	F8	1	..	20896b
2	5358	17.2	-27 22	10.5	9.3	A5	1	..	40080b	52	2466	17.5	-17 39	8.7	9.1	F5	3	..	20857b
3	5900	17.2	-28 15	9.3	8.6	Ao	5	0,1	40080b	53	5922	17.5	-27 5	10.5	9.3	Ao	2	..	40080b
4	4506	17.2	-36 17	11.0	8.1	B9	4	..	13054b	54	5368	17.5	-27 31	10.3	9.0	Ao	2	..	40080b
5	4014	17.2	-41 7	9.5	9.2	B9	4	1,1	24747b	55	5185	17.5	-32 44	4.94	7.0	Ko	..	0, R	28,202
6	4192	17.2	-43 57	7.4	7.4	Ao	7	2,2	39914b	56	4513	17.5	-36 10	5.17	5.00	B3	..	2,8	28,202
7	4064	17.2	-46 41	8.3	7.9	B9	3	0,5-	8952b	57	4511	17.5	-36 32	9.3	8.9	B9	2	..	13054b
8	3829	17.2	-47 39	9.8	9.0	Ao	2	..	39930b	58	4581	17.5	-37 50	9.9	9.2	Ao	1	..	13054b
9	3271	17.2	-50 34	8.5	8.7	Go	5	..	24598b	59	4145	17.5	-43 1	10.0	9.7	Fo	2	..	24747b
10	2952	17.2	-51 38	6.80	7.3	A5	5	3,3	8952b	60	1627	17.5	-53 37	8.8	9.1	F2	5	..	24598b
11	1618	17.2	-53 17	9.0	10.0	K2	4	..	24598b	61	1512	17.5	-55 56	8.6	8.6	A5	4	..	24598b
12	1621	17.2	-53 35	8.5	8.9	Ko	6	..	24598b	62	881	17.5	-69 18	8.5	8.5	Ao	4	0,3	19155b
13	1619	17.2	-53 50	9.0	10.0	Ko	2	..	24598b	63	1537	17.6	+50 3	8.6	8.9	F	1	..	38188i
14	907	17.2	-65 18	4.98	6.7	Ko	..	0,9-	28,202	64	1732	17.6	+49 12	8.5	8.8	F2	2	..	38188i
15	819	17.2	-66 12	8.5	9.5	Ko	5	5,1	21452b	65	1392	17.6	+46 43	8.6	8.9	F	2	..	37704i
16	1576	17.3	+45 17	7.53	8.09	Go	5	..	37704i	66	1725	17.6	+32 38	7.48	7.56	A3	5	..	38218i
17	1808	17.3	+36 39	8.5	9.6	K2	1	..	38611i	67	1604	17.6	+27 32	8.9	9.3	F5	1	..	38218i
18	1702	17.3	+30 30	8.2	8.3	A2	3	..	38218i	68	1918	17.6	+23 52	8.3	8.4	A2	6	..	37605i
19	1927	17.3	+18 0	8.02	9.02	Ko	3	..	37605i	69	1930	17.6	+18 39	5.88	6.16	Fo	10	R	37605i
20	1974	17.3	- 0 36	9.1	9.2	A2	2	..	22751b	70	1828	17.6	+17 13	8.6	8.7	A2	5	..	37605i
21	2481	17.3	-13 3	9.7	9.7	B9	1	..	20896b	71	2042	17.6	+ 7 58	8.4	9.2	G5	3	..	20710b
22	2502	17.3	-13 27	8.0	8.4	F5	6	..	20896b	72	1942	17.6	+ 6 30	9.1	10.3	K5	1	..	20710b
23	2464	17.3	-17 16	5.85	6.85	Ko	8	0,10	11036b	73	1951	17.6	+ 2 12	8.4	9.0	G	1	..	38271i
24	2500	17.3	-20 22	8.0	8.0	A3	4	..	11036b	74	2512	17.6	- 5 52	6.07	6.15	A3	7	0,7-	38207i
25	6842	17.3	-24 13	10.3	9.3	Ao	2	..	44434b	75	2325	17.6	- 8 55	10.2	10.2	Ao	2	..	21394b
26	5950	17.3	-25 25	10.1	9.2	Ao	2	..	44434b	76	2484	17.6	-12 34	9.7	9.7	Ao	1	..	19015b
27	5360	17.3	-27 10	9.8	9.2	A2	3	..	40080b	77	2506	17.6	-13 18	9.1	10.3	K5	1	..	20896b
28	5901	17.3	-28 59	9.8	9.0	B9	3	..	40080b	78	2493	17.6	-14 21	9.3	9.4	A5	3	..	19015b
29	6102	17.3	-30 8	9.68	9.2	B9	2	..	40080b	79	5957	17.6	-25 44	9.4	9.0	F8	2	..	44434b
30	4668	17.3	-34 35	7.9	8.0	B9	7	..	13054b	80	5958	17.6	-25 51	9.8	9.3	Ao	2	..	44434b
31	4120	17.3	-40 46	7.5	7.7	A3	4	..	8897b	81	4674	17.6	-34 9	8.3	8.9	A3	3	..	13054b
32	1131	17.4	+60 46	9.2	9.2	Ao	2	..	37676i	82	4583	17.6	-37 11	10.3	9.5	Ao	2	..	13054b
33	1905	17.4	+38 47	8.7	9.1	F5	2	..	37390i	83	4195	17.6	-43 18	8.6	8.7	B	4	R	24747b
34	1949	17.4	+ 9 47	8.17	8.59	F5	2	..	38156i	84	3502	17.6	-50 0	9.48	9.2	B9	5	..	24598b
35	1970	17.4	+ 7 50	8.4	9.4	Ko	2	..	20710b	85	2955	17.6	-51 11	9.4	9.2	Fo	6	R	24598b
36	2397	17.4	-15 32	8.5	8.6	A2	4	..	20857b	86	2957	17.6	-51 11	8.6	8.7	Fo	7	..	24598b
37	2465	17.4	-17 54	9.7	9.7	Ao	1	..	20857b	87	1628	17.6	-53 11	10.2	10.3	A2	3	..	24598b
38	2375	17.4	-19 45	9.0	8.9	Fo	2	..	18302b	88	1100	17.6	-58 35	8.0	8.7	F5	4	..	40088b
39	5916	17.4	-26 10	10.8	9.7	A2	2	..	40080b	89	912	17.6	-67 24	9.6	9.9	Fo	2	..	19155b
40	5917	17.4	-26 31	10.1	9.8	A3	1	..	40080b	90	1132	17.7	+60 2	8.66	8.94	Fo	3	..	37676i
41	3275	17.4	-50 39	8.2	8.1	Ao	7	..	24598b	91	1247	17.7	+53 8	9.0	9.4	F5	2	..	38188i
42	3274	17.4	-50 59	10.5	9.8	F5	2	R	24598b	92	1573	17.7	+47 31	7.9	8.9	Ko	3	..	37704i
43	1625	17.4	-53 23	8.4	8.9	Ko	7	..	24598b	93	1931	17.7	+18 27	7.95	9.02	K2	3	..	37605i
44	1007	17.4	-61 23	8.4	9.5	Ko	5	..	40088b	94	1809	17.7	+15 37	8.4	8.5	A2	4	..	37605i
45	542	17.5	+67 36	7.62	8.62	Ko	5	..	37713i	95	1952	17.7	+ 4 53	8.63	8.77	A5	3	..	38271i
46	1222	17.5	+54 50	8.01	8.43	F5	2	E	37676i	96	1977	17.7	- 0 32	7.03	8.03	Ko	5	..	38271i
47	1223	17.5	+54 15	7.24	7.58	F2	5	..	38188i	97	1978	17.7	- 0 44	9.5	10.0	F8	3	..	22751i
48	1827	17.5	+17 9	9.5	10.0	F8	2	..	37605i	98	2507	17.7	-13 35	9.0	9.0	Ao	2	..	20896b
49	1976	17.5	- 0 12	7.88	7.88	Ao	5	..	38271i	99	6112	17.7	-31 4	9.0	9.5	A2	2	..	40080b
50	2323	17.5	- 8 48	8.2	8.2	Ao	6	0,5	19136b	100	4516	17.7	-35 40	9.0	9.2	G5	1	..	13073b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

70600

8<sup>h</sup> 17<sup>m</sup>.7

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	R	17.7	-37 5	8.6	8.6	B8	3	..	13054b	51	2326	18.0	-3 36	9.0	9.1	A2	2	..	22751b
2	4023	17.7	-41 57	7.9	9.1	Ma	3	0,2	13064b	52	2452	18.0	-7 14	6.15	7.50	Ma	9	..	21394b
3	4071	17.7	-46 51	10.2	9.6	B9	1	..	39930b	53	2507	18.0	-20 41	8.6	8.9	K2	2	..	18302b
4	1440	17.7	-52 46	9.4	10.0	Go	3	..	24598b	54	5968	18.0	-25 19	8.75	9.2	Mb	3	..	44434b
5	1595	17.7	-56 33	7.4	7.9	B9	6	..	40088b	55	5965	18.0	-25 45	10.1	9.3	A2	1	..	44434b
6	2493	17.8	-9 11	8.6	9.8	K5	2	..	21394b	56	5931	18.0	-26 7	10.1	9.3	Go	3	..	40080b
7	2492	17.8	-9 40	8.5	9.3	G5	2	..	20896b	57	5917	18.0	-28 19	7.6	8.0	Ko	4	5,6	43040b
8	2330	17.8	-11 56	9.3	10.5	K5	1	..	19015b	58	6124	18.0	-30 41	9.4	9.0	B9	3	..	40080b
9	2302	17.8	-18 33	9.2	9.3	A2	3	..	20857b	59	4599	18.0	-37 53	8.3	9.0	K2	2	..	13054b
10	2504	17.8	-21 2	8.6	8.4	A2	5	..	18302b	60	4135	18.0	-40 49	8.0	8.6	Ko	3	..	13064b
11	5928	17.8	-26 11	9.1	9.7	Ko	1	..	40080b	61	4078	18.0	-46 10	9.8	9.0	F8	2	..	39930b
12	4245	17.8	-39 18	6.18	6.8	A5	9	..	8897b	62	4077	18.0	-47 1	8.0	8.7	K2	3	..	39930b
13	4026	17.8	-41 20	9.5	9.7	Go	3	..	24747b	63	998	18.1	+62 32	8.7	9.5	G5	2	..	37676i
14	4150	17.8	-42 6	9.4	9.4	B9	3	..	24747b	64	1740	18.1	+43 52	8.2	8.6	F5	3	..	37704i
15	4033	17.8	-45 43	9.8	9.0	Ao	4	0,2	24747b	65	1956	18.1	+5 52	8.4	9.4	Ko	1	..	20710b
16	2958	17.8	-51 18	9.8	9.0	B9	5	..	24598b	66	1957	18.1	+4 54	8.71	9.49	G5	3	5,1	20710b
17	1596	17.8	-56 23	9.1	9.7	F8	2	R	40088b	67	2454	18.1	-7 24	8.7	8.8	A5	6	..	21394b
18	1598	17.8	-56 23	9.1	9.7	F8	2	R	40088b	68	2453	18.1	-7 41	9.3	9.4	A2	2	..	21394b
19	1483	17.8	-57 21	8.9	8.9	A	3	..	40088b	69	2332	18.1	-8 9	9.2	9.3	A5	2	..	19136b
20	1484	17.8	-57 22	8.8	8.8	A	3	..	40088b	70	2328	18.1	-8 16	8.6	8.6	Ao	4	..	19136b
21	1024	17.8	-59 35	9.2	10.4	K5	1	..	40088b	71	2331	18.1	-9 4	9.3	10.4	K2	1	..	21394b
22	1023	17.8	-59 47	7.82	7.3	B9	5	1,9	8913b	72	2332	18.1	-12 4	8.5	9.6	K2	2	..	19015b
23	850	17.8	-64 58	8.96	9.0	A3	4	..	19155b	73	2490	18.1	-12 44	6.30	7.30	Ko	10	..	19015b
24	633	17.9	+65 11	8.4	9.2	G5	2	..	37713i	74	2416	18.1	-16 14	9.2	9.3	A2	3	..	20857b
25	777	17.9	+63 1	8.7	8.8	A5	3	..	37676i	75	5972	18.1	-26 3	11.3	9.3	Ao	3	..	40080b
26	1639	17.9	+48 5	8.02	8.44	F5	4	..	37704i	76	5924	18.1	-28 8	11.3	9.2	A3	2	..	40080b
27	1806	17.9	+31 39	7.48	8.48	Ko	4	..	38218i	77	6125	18.1	-30 41	11.0	9.8	A	1	..	40080b
28	1704	17.9	+30 3	8.6	8.7	A5	2	..	38218i	78	4521	18.1	-35 46	9.9	9.2	A	1	..	13073b
29	2546	17.9	-2 38	8.0	9.0	Ko	3	0,2	22751b	79	4523	18.1	-36 1	10.6	9.5	A	1	..	13073b
30	2324	17.9	-3 55	8.0	8.1	A2	2	0,4	38207i	80	4137	18.1	-40 8	7.60	7.7	A2	5	..	8897b
31	2571	17.9	-6 21	7.8	7.8	Ao	9	..	21394b	81	4155	18.1	-43 2	9.8	9.7	Go	2	..	24747b
32	2495	17.9	-10 22	9.1	9.7	Go	1	..	20896b	82	4325	18.1	-44 41	8.0	7.8	Ao	5	0,9	13038b
33	2331	17.9	-11 45	9.3	9.7	F5	2	..	19015b	83	4326	18.1	-44 50	10.2	9.3	Ao	5	..	24747b
34	2487	17.9	-12 20	8.7	9.7	Ko	2	..	19015b	84	1515	18.1	-55 38	9.4	10.0	G	2	E	40088b
35	2506	17.9	-20 30	9.2	9.2	Ao	3	..	18302b	85	671	18.1	-71 59	8.1	9.1	Ko	3	..	24527b
36	2243	17.9	-23 5	8.7	8.6	Ao	4	..	18302b	86	245	18.2	+82 29	8.8	9.6	G5	1	..	38331i
37	5933	17.9	-26 53	9.0	9.5	K5	2	..	40080b	87	1818	18.2	+43 20	8.4	9.2	G5	2	..	37704i
38	6022	17.9	-29 15	9.6	8.6	B9	5	..	40080b	88	1747	18.2	+29 4	8.8	9.4	Go	1	..	38218i
39	5949	17.9	-31 44	9.1	8.3	B8	3	..	12788b	89	1971	18.2	+7 8	8.4	9.6	K5	3	E	38271i
40	4517	17.9	-35 31	9.7	9.5	Ao	1	..	13073b	90	2334	18.2	-8 44	9.3	9.9	Go	2	..	21394b
41	4346	17.9	-38 7	9.3	9.4	Ao	2	..	13054b	91	2496	18.2	-10 26	9.3	9.8	F8	1	..	20896b
42	4247	17.9	-39 24	7.5	7.7	G5	6	..	13064b	92	2333	18.2	-11 10	8.8	9.3	F8	3	..	19015b
43	4076	17.9	-46 41	9.0	8.4	B9	4	0,4	13038b	93	2417	18.2	-16 25	8.8	9.8	Ko	1	..	20857b
44	1592	17.9	-54 33	8.4	8.6	F2	6	..	24598b	94	6857	18.2	-24 28	8.4	8.3	Ao	5	1,2	18302b
45	533	18.0	+68 19	8.0	8.3	Fo	5	..	37713i	95	6858	18.2	-25 5	8.65	8.6	Ao	4	..	18302b
46	1577	18.0	+44 58	8.72	9.72	Ko	2	..	37704i	96	5204	18.2	-33 3	8.3	8.3	A2	4	..	13054b
47	1859	18.0	+42 20	6.22	7.40	K5	8	..	37704i	97	4525	18.2	-36 4	11.3	9.8	A	1	..	13073b
48	2095	18.0	+39 49	8.77	9.19	F5	3	0,2	37390i	98	4252	18.2	-39 59	9.30	9.7	K2	1	..	24747b
49	2043	18.0	+8 4	8.4	9.4	Ko	3	..	20710b	99	4140	18.2	-40 52	8.6	8.5	Ao	6	..	13064b
50	1979	18.0	-0 26	9.1	9.6	F8	2	..	22751b	100	4328	18.2	-44 13	10.0	9.0	Ao	6	0,2	24747b

THE HENRY DRAPER CATALOGUE.

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8<sup>h</sup> 18<sup>m</sup>.2

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	3504	18.2	-49 52	9.6	9.8	A3	1	..	24598b	51	929	18.5	-63 35	9.4	9.5	A2	2	..	40095b
2	2962	18.2	-51 14	8.9	8.4	B9	7	..	24598b	52	825	18.5	-66 18	9.0	9.6	Go	3	E	21452b
3	2963	18.2	-51 55	6.62	7.0	A0	7	0.4	8952b	53	1574	18.6	+47 22	8.7	9.7	Ko	2	..	37704i
4	917	18.2	-67 23	9.5	9.8	F2	2	..	19155b	54	2097	18.6	+39 35	8.7	9.2	F8	2	..	37390i
5	1691	18.3	+33 50	8.9	9.3	F5	1	..	38611i	55	1728	18.6	+32 35	7.9	8.9	Ko	1	..	38218i
6	1606	18.3	+27 18	8.8	8.9	A2	2	..	38635i	56	1958	18.6	+ 5 30	8.0	9.2	K5	2	..	38271i
7	1778	18.3	+26 47	8.5	8.6	A2	3	..	38218i	57	2288	18.6	+ 0 24	7.36	7.64	Fo	6	..	38271i
8	2573	18.3	- 6 52	9.2	9.3	A3	5	..	21394b	58	2457	18.6	- 7 54	9.2	9.5	Fo	3	5.3	19136b
9	2335	18.3	-11 44	8.8	9.8	Ko	3	..	19015b	59	2335	18.6	- 8 12	9.3	10.3	Ko	2	..	21394b
10	2406	18.3	-15 48	8.5	8.5	B9	3	..	20857b	60	2409	18.6	-21 15	9.2	9.2	A2	3	..	18302b
11	2405	18.3	-21 48	8.5	8.3	F5	5	..	18302b	61	5988	18.6	-26 1	5.86	6.0	Fo	..	0.7 R	56,125
12	2407	18.3	-21 48	9.0	8.9	F5	2	..	18302b	62	6145	18.6	-30 23	10.1	9.8	A0	1	..	40080b
13	5940	18.3	-26 10	11.0	9.7	A	1	..	40080b	63	6144	18.6	-31 5	8.4	8.9	A0	4	..	40080b
14	5964	18.3	-31 36	7.6	9.0	Ko	1	..	12788b	64	4151	18.6	-40 40	7.1	7.5	F5	6	0.9	8897b
15	4157	18.3	-42 31	7.8	7.9	B9	5	0.8	39914b	65	4041	18.6	-41 23	7.9	9.4	K5	1	..	13064b
16	4207	18.3	-43 55	9.2	8.7	A0	7	2.3	24747b	66	3855	18.6	-47 19	9.4	8.5	B9	3	..	39930b
17	4330	18.3	-44 41	8.3	8.4	Ko	5	0.3	24747b	67	3287	18.6	-50 58	10.9	10.0	A2	3	..	24598b
18	3719	18.3	-48 38	9.6	9.3	A0	2	..	39930b	68	1637	18.6	-53 26	8.6	9.1	F5	6	..	24598b
19	1595	18.3	-54 54	9.0	10.0	Ko	2	..	24598b	69	1605	18.6	-56 53	9.8	9.9	A2	1	..	40088b
20	1486	18.3	-57 59	9.4	9.4	A0	2	..	40088b	70	1604	18.6	-57 2	8.9	9.2	Fo	2	..	40088b
21	2045	18.4	+ 7 52	8.8	9.2	F5	4	..	20710b	71	1819	18.7	+35 22	6.21	7.21	Ko	7	0.7	38611i
22	5385	18.4	-27 42	9.8	9.0	Fo	2	..	40080b	72	1973	18.7	+ 7 46	8.8	9.8	Ko	2	..	20710b
23	5929	18.4	-28 9	11.0	9.2	F2	2	..	40080b	73	2576	18.7	- 6 31	8.6	9.6	Ko	4	..	21394b
24	5931	18.4	-28 39	8.0	7.5	F5	5	0.3	40080b	74	2309	18.7	-18 22	8.7	9.0	Fo	3	..	20857b
25	6041	18.4	-29 23	6.99	7.4	Fo	5	0.8	43040b	75	5975	18.7	-31 23	9.1	8.7	B8	3	..	12788b
26	5209	18.4	-32 56	9.3	8.9	B9	1	..	13046b	76	4922	18.7	-33 36	8.9	8.1	A0	5	0.4	13054b
27	4918	18.4	-33 49	9.9	9.2	A2	1	..	13046b	77	4923	18.7	-33 50	10.1	9.5	A0	1	..	13046b
28	4045	18.4	-46 1	8.0	9.0	K2	2	..	39930b	78	4612	18.7	-37 19	8.6	9.2	K5	1	..	13054b
29	3853	18.4	-47 44	9.8	9.9	K2	1	..	39930b	79	4155	18.7	-40 38	8.9	9.7	K5	4	0.1	24747b
30	2964	18.4	-51 23	8.9	8.3	B9	7	..	24598b	80	4214	18.7	-43 21	8.6	8.8	K5	1	..	39914b
31	1444	18.4	-52 16	7.0	7.2	A5	5	2.3	8952b	81	4215	18.7	-44 0	9.4	9.6	Go	4	..	24747b
32	852	18.4	-64 30	8.9	9.0	A2	2	..	13025b	82	1598	18.7	-54 43	9.0	9.4	F5	3	..	24598b
33	1741	18.5	+44 17	8.8	9.4	G	2	..	37704i	83	1027	18.7	-59 47	8.4	9.6	Ko	3	..	40088b
34	1830	18.5	+10 58	6.29	7.47	K5	5	..	38156i	84	497	18.7	-74 52	9.3	10.4	K2	1	..	22237b
35	2327	18.5	- 4 6	8.5	9.5	Ko	1	..	22751b	85	1909	18.8	+13 49	8.8	9.1	F2	3	..	38960i
36	2498	18.5	-10 40	9.1	9.4	F	1	..	20896b	86	1952	18.8	+ 9 34	8.4	8.5	A2	2	..	38156i
37	2338	18.5	-11 20	9.3	9.8	F8	2	..	19015b	87	2578	18.8	- 6 35	9.5	9.5	A	2	..	21394b
38	2409	18.5	-16 4	8.8	9.8	Ko	1	..	20857b	88	2577	18.8	- 6 36	8.7	9.3	Go	6	..	21394b
39	2308	18.5	-18 23	9.2	10.2	K	1	..	20857b	89	2339	18.8	-12 3	9.2	10.0	G5	1	..	19015b
40	2510	18.5	-20 26	8.7	9.2	Ko	1	..	18302b	90	2497	18.8	-12 10	8.6	9.6	Ko	3	..	19015b
41	5389	18.5	-27 39	9.1	9.2	F2	2	..	40080b	91	2513	18.8	-13 15	8.6	9.7	K2	2	..	19015b
42	4538	18.5	-36 6	10.6	9.2	B9	1	..	13073b	92	2310	18.8	-18 37	8.2	8.2	B9	8	..	20857b
43	4361	18.5	-38 13	8.6	7.9	B8	4	..	13054b	93	5951	18.8	-26 10	10.3	9.3	A0	3	..	40080b
44	4147	18.5	-40 15	8.90	8.8	A0	5	0.2	24747b	94	5955	18.8	-26 42	8.0	8.4	A0	7	..	40080b
45	4160	18.5	-42 43	9.8	9.4	A0	5	0.1	24747b	95	6052	18.8	-29 42	9.6	9.0	A0	3	..	40080b
46	3723	18.5	-48 35	9.0	8.3	A0	3	..	13038b	96	5976	18.8	-31 17	7.02	7.0	B8	7	..	12788b
47	3285	18.5	-50 26	10.2	10.0	A0	2	..	24598b	97	4263	18.8	-39 55	8.70	8.5	B9	6	1.3	24747b
48	3283	18.5	-50 43	10.9	10.1	F5	1	..	24598b	98	4157	18.8	-40 7	10.6	9.7	A0	2	..	24747b
49	3284	18.5	-51 5	8.3	7.7	B8	9	..	24598b	99	3726	18.8	-48 6	9.1	9.2	G5	2	..	39930b
50	1026	18.5	-59 39	9.9	9.9	A0	2	..	40088b	100	1028	18.8	-59 16	8.3	9.2	F5	4	..	40088b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

70800

8<sup>h</sup> 18<sup>m</sup>.8

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	932	18.8	-63 11	8.0	9.0	Ko	5	2,3	40095b	51	3860	19.1	-47 28	8.5	7.8	Ao	4	..	8952b
2	770	18.8	-68 21	9.7	9.7	Ao	1	..	19155b	52	1609	19.1	-56 7	9.1	9.4	Fo	3	..	40088b
3	1856	18.9	+37 44	7.84	8.26	F5	5	..	37390i	53	854	19.1	-64 11	9.0	9.8	G5	1	..	40095b
4	2028	18.9	-1 11	6.80	7.58	G5	6	..	38271i	54	771	19.1	-68 41	8.0	8.8	G5	5	5,2	19155b
5	2460	18.9	-8 8	9.3	9.4	A5	2	..	19136b	55	675	19.1	-71 40	8.2	8.3	A3	6	..	24527b
6	2497	18.9	-9 8	9.2	9.2	Ao	2	..	21394b	56	1165	19.2	+59 43	8.51	9.01	F8	2	..	37676i
7	2498	18.9	-9 38	8.2	9.2	Ko	4	..	19136b	57	1814	19.2	+36 50	8.0	9.0	Ko	1	..	37390i
8	2498	18.9	-12 54	9.2	9.3	A3	2	..	19015b	58	1706	19.2	+29 58	8.59	9.59	Ko	1	..	38218i
9	2424	18.9	-16 20	8.5	9.6	K2	1	..	20857b	59	2519	19.2	-5 22	7.65	8.83	K5	6	..	21394b
10	2410	18.9	-21 15	8.8	9.2	Ko	2	..	18302b	60	2341	19.2	-8 30	8.6	8.7	A3	6	..	19136b
11	2249	18.9	-22 9	9.2	9.2	A5	2	..	18302b	61	2500	19.2	-12 22	9.0	9.5	F8	3	..	19015b
12	6872	18.9	-24 7	9.8	8.7	A2	3	..	18302b	62	2516	19.2	-13 18	8.1	8.6	F8	6	..	19015b
13	6871	18.9	-24 45	9.8	9.5	A2	2	..	18302b	63	2511	19.2	-20 49	9.1	9.8	K5	1	3,1	18302b
14	5940	18.9	-28 38	11.3	9.5	Ao	2	..	40080b	64	6882	19.2	-24 25	10.3	9.2	Ao	2	..	18302b
15	4925	18.9	-34 1	7.9	9.2	Ko	1	..	13046b	65	5405	19.2	-27 7	9.0	9.5	Ko	1	..	40080b
16	4619	18.9	-37 29	9.9	8.3	B9	4	..	13054b	66	5947	19.2	-28 32	11.0	9.3	A3	2	..	40080b
17	4264	18.9	-39 9	9.7	9.1	B9	4	..	24747b	67	5226	19.2	-32 49	9.5	9.2	B8	1	..	13046b
18	4159	18.9	-40 55	10.6	10.0	Ao	2	..	24747b	68	4932	19.2	-33 31	8.6	8.4	A	4	..	12788b
19	2971	18.9	-51 52	11.5	10.5	G	1	..	24598b	69	4935	19.2	-33 55	8.1	9.2	K2	1	..	12788b
20	934	18.9	-64 2	9.6	9.6	Ao	2	..	40095b	70	4718	19.2	-34 39	8.1	8.3	F8	3	0,3	12788b
21	918	18.9	-68 1	8.7	9.9	K5	1	..	24527b	71	4268	19.2	-39 35	7.9	8.2	F5	4	..	13064b
22	778	19.0	+62 55	9.0	9.3	F	3	R	37676i	72	4223	19.2	-43 52	8.4	7.9	Ao	6	..	39914b
23	779	19.0	+62 55	9.7	10.0	F	3	R	37676i	73	4345	19.2	-44 25	9.6	9.1	Fo	5	..	24747b
24	1048	19.0	+61 28	9.2	10.2	K	1	..	37676i	74	2972	19.2	-51 25	10.5	10.1	F5	2	..	24598b
25	1920	19.0	+24 17	7.27	7.61	Fo	7	5,7 R	38635i	75	1011	19.2	-62 5	7.7	7.7	B9	4	1,8	8913b
26	2079	19.0	+20 29	7.20	7.34	A5	4	..	37605i	76	936	19.2	-63 42	8.3	9.5	K5	2	..	13025b
27	2078	19.0	+20 28	9.2	9.3	A5	3	..	37605i	77	999	19.3	+62 43	8.9	9.5	G	2	R	37676i
28	1955	19.0	+8 54	8.5	9.3	G5	3	..	20710b	78	1928	19.3	+22 10	9.2	9.7	F8.	1	..	38635i
29	2557	19.0	-2 37	8.2	8.2	Ao	7	2,4	22751b	79	1789	19.3	+10 4	8.47	9.47	Ko	1	..	38156i
30	2518	19.0	-5 59	8.6	9.4	G5	3	..	21394b	80	1958	19.3	+2 6	8.8	9.8	Ko	1	..	38271i
31	2339	19.0	-8 8	8.15	8.23	A3	6	..	19136b	81	2030	19.3	-2 6	8.97	9.75	G5	1	..	38207i
32	2338	19.0	-8 38	9.2	9.3	A2	3	..	19136b	82	2463	19.3	-8 4	8.4	8.4	Ao	7	..	19136b
33	2514	19.0	-14 7	9.2	9.2	A	1	..	20896b	83	2342	19.3	-8 55	9.7	10.2	F8	2	..	21394b
34	2475	19.0	-17 55	9.2	9.8	Go	2	..	20857b	84	2501	19.3	-9 18	8.6	9.6	Ko	3	..	19136b
35	2312	19.0	-18 46	9.3	10.5	K5	1	..	20857b	85	2512	19.3	-20 44	9.1	9.2	Go	2	..	46182b
36	2386	19.0	-19 25	9.1	9.2	F5	2	..	18302b	86	7239	19.3	-23 57	8.4	9.5	K5	1	..	18302b
37	5979	19.0	-31 7	8.32	8.1	B9	5	R	40080b	87	6004	19.3	-25 15	10.1	9.3	A3	1	..	44434b
38	4626	19.0	-37 59	10.1	8.7	A2	2	..	13054b	88	6002	19.3	-25 45	9.1	9.2	A2	2	..	44434b
39	1490	19.0	-57 39	6.07	6.3	B5	5	..	42241b	89	5409	19.3	-27 30	7.10	8.0	Go	9	..	40080b
40	826	19.0	-66 11	8.9	9.3	F5	3	E	21452b	90	6070	19.3	-29 58	9.34	8.9	B8	3	..	40080b
41	1307	19.1	+52 15	9.4	9.4	B9	2	..	38188i	91	4633	19.3	-37 55	9.2	8.1	B8	3	..	13054b
42	2004	19.1	+19 29	9.1	10.1	Ko	1	..	37605i	92	4346	19.3	-44 33	7.3	7.8	Fo	6	..	13038b
43	1836	19.1	+17 32	7.04	7.46	F5	7	..	37605i	93	3865	19.3	-47 36	9.6	9.4	F8	2	..	39930b
44	2048	19.1	+7 58	7.8	8.8	Ko	3	0,2	20710b	94	1447	19.3	-52 12	9.4	10.0	Go	2	..	24598b
45	2579	19.1	-6 56	8.6	8.6	Ao	8	..	21394b	95	1491	19.3	-57 48	8.3	8.9	K5	4	..	40088b
46	2313	19.1	-19 0	9.0	9.6	Go	4	..	20857b	96	506	19.3	-76 7	8.0	8.8	G5	6	..	22237b
47	4370	19.1	-38 35	8.6	8.5	B8	3	..	13054b	97	1921	19.4	+24 40	8.41	9.41	Ko	3	..	38635i
48	4265	19.1	-39 30	9.0	9.1	A3	1	..	13064b	98	1814	19.4	+15 20	9.5	9.6	A2	1	..	38960i
49	4219	19.1	-43 35	9.2	9.6	G5	4	..	24747b	99	1832	19.4	+12 34	8.0	9.0	Ko	2	..	38156i
50	4054	19.1	-45 29	8.8	8.4	B9	3	..	13038b	100	1962	19.4	+5 32	8.4	8.8	F5	4	..	20710b

## THE HENRY DRAPER CATALOGUE.

70900

8<sup>h</sup> 19<sup>m</sup>.4

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	2559	19.4	— 2 49	8.8	9.8	Ko	1	..	22751b	51	3736	19.6	— 48 44	7.7	7.4	Ao	2	..	8952b
2	2503	19.4	— 10 50	9.0	10.0	Ko	3	..	19015b	52	1610	19.6	— 54 42	9.5	9.5	Ao	3	..	24598b
3	2502	19.4	— 11 7	9.2	10.2	Ko	1	..	19015b	53	315	19.6	— 79 1	7.3	7.3	Ao	7	..	20869b
4	2417	19.4	— 15 28	8.0	8.3	F2	5	..	20857b	54	1139	19.7	+ 57 4	8.2	8.5	F2	3	..	37676i
5	2427	19.4	— 16 46	8.8	9.1	Fo	2	..	20857b	55	1867	19.7	+ 42 45	8.8	9.4	Go	2	..	37704i
6	2317	19.4	— 18 14	9.3	9.3	Ao	2	..	20857b	56	1931	19.7	+ 22 49	9.2	9.3	A2	2	..	38635i
7	6005	19.4	— 25 7	8.75	8.7	F2	3	..	18302b	57	2290	19.7	+ 0 12	8.2	8.8	Go	3	..	38271i
8	5411	19.4	— 27 20	10.3	8.9	B9	3	..	40080b	58	2333	19.7	— 3 26	5.67	6.09	F5	7	..	38207i
9	6071	19.4	— 29 29	10.1	9.8	Ko	1	..	40080b	59	2466	19.7	— 8 0	9.1	9.2	A5	4	..	19136b
10	5990	19.4	— 32 0	8.2	8.1	A2	5	..	12788b	60	2517	19.7	— 20 59	9.2	9.2	A5	2	..	18302b
11	4722	19.4	— 34 21	8.1	8.3	A3	3	..	13054b	61	6014	19.7	— 26 4	9.6	9.0	Ao	2	..	13072b
12	4173	19.4	— 40 28	10.1	9.4	Ao	2	..	13064b	62	5971	19.7	— 26 21	10.8	9.2	A2	2	..	44434b
13	4063	19.4	— 41 15	10.1	9.7	F8	2	..	24747b	63	5961	19.7	— 28 39	6.57	6.5	Ao	8	0.9	43040b
14	3866	19.4	— 47 18	9.8	9.6	F5	1	..	39930b	64	6083	19.7	— 29 21	10.8	9.8	A	1	..	40080b
15	1013	19.4	— 61 8	9.1	9.8	G5	1	..	40088b	65	5236	19.7	— 32 16	8.4	8.9	A2	2	..	12788b
16	938	19.4	— 63 45	8.0	9.0	Ko	2	..	13025b	66	4067	19.7	— 45 47	9.4	9.6	Ko	1	..	39930b
17	544	19.5	+ 67 17	8.8	9.8	Ko	2	..	38603i	67	4108	19.7	— 46 47	9.2	9.1	Go	2	..	39930b
18	1120	19.5	+ 58 31	8.1	8.9	G5	3	..	37676i	68	1538	19.8	+ 49 53	7.92	9.10	K5	2	..	38188i
19	1225	19.5	+ 53 59	7.8	8.1	Fo	4	..	38188i	69	1858	19.8	+ 37 1	8.6	9.0	F5	1	..	37390i
20	1857	19.5	+ 37 18	7.93	8.93	Ko	3	..	37390i	70	2345	19.8	— 8 36	8.1	8.2	A2	7	..	19136b
21	1922	19.5	+ 23 53	8.3	9.3	Ko	2	..	38635i	71	2504	19.8	— 9 42	8.6	8.6	Ao	5	..	19136b
22	1929	19.5	+ 22 42	8.7	9.5	G5	2	..	38635i	72	2506	19.8	— 10 12	8.46	8.46	Ao	6	..	19015b
23	1987	19.5	— 0 49	6.83	7.39	Go	6	..	38271i	73	2344	19.8	— 11 12	9.1	10.1	Ko	2	..	19015b
24	2501	19.5	— 12 28	8.8	10.0	K5	2	..	19015b	74	6084	19.8	— 29 19	9.8	9.8	G	1	..	40080b
25	2517	19.5	— 13 43	9.3	9.4	A2	3	2.2	19015b	75	4279	19.8	— 39 41	8.6	8.9	F5	2	..	13064b
26	6889	19.5	— 24 25	9.8	9.3	Ao	1	..	18302b	76	4184	19.8	— 42 40	8.6	8.5	Ao	5	0.3	13064b
27	6074	19.5	— 29 11	10.1	9.5	G5	1	..	40080b	77	3515	19.8	— 49 30	10.5	10.0	A5	2	..	24598b
28	6167	19.5	— 30 29	6.98	8.4	K2	2	..	43040b	78	1647	19.8	— 53 32	9.1	9.1	A2	6	..	24598b
29	4175	19.5	— 40 11	10.3	9.7	Ao	2	..	24747b	79	1611	19.8	— 54 54	8.9	9.4	Ko	3	..	24598b
30	3734	19.5	— 48 10	4.90	4.71	B2	..	1.7 R	28,202	80	1102	19.8	— 58 24	8.2	8.4	Ao	6	..	40088b
31	2973	19.5	— 51 45	10.0	10.0	F5	4	..	24598b	81	1030	19.8	— 60 4	8.3	8.7	F2	6	..	40088b
32	1448	19.5	— 52 17	9.7	9.8	A2	4	..	24598b	82	940	19.8	— 63 47	5.98	7.6	G5	..	0.8	56,125
33	683	19.5	— 72 29	9.1	9.1	Ao	1	..	22237b	83	417	19.9	+ 71 55	8.6	9.4	G5	1	..	38602i
34	1792	19.6	+ 10 17	8.6	8.7	A2	1	..	38156i	84	553	19.9	+ 66 33	8.1	9.1	Ko	1	..	38603i
35	1960	19.6	+ 9 45	6.90	7.90	Ko	3	..	38156i	85	1276	19.9	+ 55 32	7.7	8.7	Ko	3	..	38188i
36	1964	19.6	+ 5 41	8.2	9.4	K5	3	..	20710b	86	2099	19.9	+ 39 24	9.1	9.9	G5	1	..	37390i
37	2328	19.6	— 4 23	6.00	6.34	F2	6	3.10	38207i	87	1908	19.9	+ 37 54	8.3	8.4	A3	4	..	37390i
38	2343	19.6	— 8 11	7.78	9.13	Mb	5	R	19136b	88	1824	19.9	+ 34 33	8.5	8.9	F5	2	..	38611i
39	2519	19.6	— 13 44	10.3	10.4	A2	1	..	19015b	89	1835	19.9	+ 21 31	9.5	10.3	G5	2	..	37605i
40	2429	19.6	— 16 33	9.2	9.8	Go	2	..	20857b	90	1817	19.9	+ 15 28	8.6	9.7	K2	1	..	38960i
41	2477	19.6	— 17 50	8.7	9.0	F2	4	..	20857b	91	1972	19.9	+ 4 49	7.91	9.26	Mb	2	..	38271i
42	2319	19.6	— 18 48	6.97	7.97	Ko	8	..	20857b	92	2561	19.9	— 3 5	9.0	9.5	F8	2	..	22751b
43	5968	19.6	— 27 0	8.8	9.3	Ko	2	..	40080b	93	2520	19.9	— 6 1	9.2	10.4	K5	1	..	21394b
44	5958	19.6	— 28 22	11.0	9.3	A	2	..	40080b	94	2469	19.9	— 7 26	9.3	9.4	A3	2	..	21394b
45	6079	19.6	— 30 4	7.24	7.3	Ao	4	1.8	43040b	95	2345	19.9	— 11 12	7.42	8.49	K2	7	..	19015b
46	4638	19.6	— 37 58	6.34	7.3	Ma	6	..	13054b	96	2524	19.9	— 13 31	9.3	10.1	G5	2	..	19015b
47	4274	19.6	— 40 4	7.37	7.6	B8	5	..	8897b	97	2419	19.9	— 15 15	8.20	9.20	Ko	3	..	20857b
48	4178	19.6	— 42 55	7.0	7.2	B8	8	1.2	39914b	98	6089	19.9	— 29 32	8.06	8.1	A5	6	2.2	40080b
49	4062	19.6	— 45 33	9.8	9.0	Ao	2	..	39930b	99	4389	19.9	— 38 8	7.8	7.9	B8	6	..	13054b
50	3873	19.6	— 47 53	8.8	7.5	B8	4	..	8952b	100	4071	19.9	— 41 28	9.3	9.7	Ao	3	..	24747b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

71000

8<sup>h</sup> 19<sup>m</sup>.9

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	3517	19.9	-49 43	8.8	8.6	Ao	7	..	24598b	51	1782	20.2	+26 51	8.7	9.7	Ko	2	..	38635i
2	3300	19.9	-50 37	9.6	10.4	Ko	1	..	24598b	52	2082	20.2	+20 31	8.7	8.7	B9	4	..	37605i
3	3298	19.9	-51 3	8.5	8.7	Ao	8	..	24598b	53	1939	20.2	+18 10	7.9	8.5	Go	3	..	37605i
4	1451	19.9	-52 15	8.5	8.9	F2	7	..	24598b	54	2522	20.2	- 5 19	8.50	9.57	K2	3	..	21394b
5	914	19.9	-65 19	9.8	10.2	F5	1	..	19155b	55	2508	20.2	-14 31	8.4	9.6	K5	2	..	19015b
6	922	19.9	-67 51	8.8	8.8	Ao	3	..	24527b	56	2421	20.2	-15 58	8.7	9.9	K5	1	..	20857b
7	777	19.9	-68 45	6.95	7.9	Ko	6	0,3	24527b	57	4578	20.2	-36 24	7.22	7.3	B9	5	0,5	44421b
8	1753	20.0	+28 58	7.8	8.8	Ko	3	..	38218i	58	4077	20.2	-41 32	10.3	9.7	B9	2	..	24747b
9	2503	20.0	-14 17	8.2	8.3	A2	8	..	19015b	59	4235	20.2	-43 25	10.0	9.3	B8	3	..	24747b
10	2504	20.0	-15 8	7.88	8.88	Ko	5	..	20857b	60	4075	20.2	-45 18	7.44	7.8	Ao	7	..	13038b
11	2394	20.0	-20 6	9.5	9.5	Ao	1	..	18302b	61	3885	20.2	-47 57	8.9	9.6	K5	1	..	39930b
12	2417	20.0	-22 4	8.2	8.6	F8	4	..	18302b	62	3306	20.2	-51 3	9.8	9.8	Fo	3	..	24598b
13	5971	20.0	-28 9	9.6	9.0	B9	2	..	40080b	63	1649	20.2	-53 10	8.9	9.2	F2	3	..	24598b
14	5968	20.0	-28 21	10.3	8.6	Ao	3	..	40080b	64	1614	20.2	-54 54	9.4	9.4	Ao	5	..	24598b
15	5245	20.0	-32 35	7.03	7.2	B3	7	..	12788b	65	1031	20.2	-59 28	8.0	9.5	Ko	4	..	40088b
16	4184	20.0	-40 43	9.9	9.7	Ao	4	0,1	24747b	66	678	20.2	-71 11	5.72	6.2	Aop	..	1, R	28,202
17	4185	20.0	-41 4	9.9	9.4	Ao	1	..	13064b	67	326	20.3	+76 5	8.52	9.30	G5	3	..	38187i
18	4186	20.0	-42 6	9.2	10.0	Ma	1	..	24747b	68	1052	20.3	+61 17	8.6	8.7	A5	2	..	37676i
19	4187	20.0	-42 29	8.4	8.5	B8	5	1,4	13064b	69	1859	20.3	+36 58	8.1	9.1	Ko	1	..	37390i
20	4230	20.0	-44 5	9.6	9.4	Ao	2	..	13064b	70	2337	20.3	- 3 31	9.1	9.2	A2	4	0,1	22751b
21	4113	20.0	-46 8	10.2	9.6	K2	1	..	39930b	71	2585	20.3	- 6 51	8.0	8.8	G5	6	..	19136b
22	1452	20.0	-52 31	9.8	10.4	G	1	..	24598b	72	2510	20.3	-12 26	6.90	6.85	B8	5	1,10	8827b
23	1648	20.0	-53 28	8.7	9.5	G5	3	..	24598b	73	2435	20.3	-16 51	9.9	10.0	A2	1	..	20857b
24	1613	20.0	-54 20	9.4	9.5	A2	3	..	24598b	74	6029	20.3	-25 48	9.1	9.0	Ko	2	..	13072b
25	1051	20.1	+61 30	8.5	9.3	G5	3	..	37676i	75	5428	20.3	-27 19	9.8	8.9	A3	4	..	40080b
26	1167	20.1	+59 5	8.9	9.9	K	1	..	37676i	76	4747	20.3	-34 39	7.4	8.0	A3	6	0,6	12788b
27	2050	20.1	+40 13	7.22	8.22	Ko	5	..	37704i	77	4079	20.3	-41 43	7.5	7.7	B9	5	..	8897b
28	1600	20.1	+28 45	8.1	9.1	Ko	2	..	38218i	78	4192	20.3	-42 31	10.0	9.7	A2	2	..	24747b
29	2081	20.1	+19 55	8.90	9.18	Fo	3	..	37605i	79	3887	20.3	-47 13	10.5	9.6	Ao	1	..	39930b
30	1842	20.1	+17 23	6.18	6.52	F2	8	0,9 R	38960i	80	3520	20.3	-49 20	10.0	9.8	Fo	2	..	24598b
31	2035	20.1	- 1 47	9.1	9.1	Ao	2	..	22751b	81	2983	20.3	-52 4	10.9	10.1	A5	3	..	24598b
32	2508	20.1	-10 26	8.4	9.5	K2	3	..	19015b	82	1453	20.3	-53 4	9.0	9.0	Fo	5	..	24598b
33	2347	20.1	-12 1	9.3	10.3	Ko	1	..	19015b	83	1615	20.3	-54 10	8.1	7.6	Ao	8	..	24598b
34	2525	20.1	-13 45	9.2	9.2	Ao	3	..	19015b	84	1105	20.3	-58 24	9.1	10.1	Ko	2	..	40088b
35	2505	20.1	-14 52	8.8	9.8	Ko	2	5,2	19015b	85	1104	20.3	-58 29	8.6	9.5	G5	3	..	40088b
36	2256	20.1	-22 34	9.2	8.9	A3	3	..	18302b	86	500	20.3	-74 42	7.5	7.6	A2	8	..	22237b
37	6093	20.1	-29 32	8.8	9.8	K5	1	..	40080b	87	333	20.4	+77 48	8.8	9.8	Ko	2	..	38331i
38	5246	20.1	-32 59	8.3	9.5	K2	1	..	13046b	88	545	20.4	+67 38	6.01	6.79	G5	8	5,9	38603i
39	4186	20.1	-40 48	8.9	9.7	G5	2	..	24747b	89	1142	20.4	+56 56	8.2	8.5	Fo	4	..	37676i
40	4233	20.1	-43 9	9.2	9.3	Ko	3	..	24747b	90	1252	20.4	+53 48	7.7	8.8	K2	3	..	38188i
41	4234	20.1	-43 55	9.4	8.8	Ao	2	..	13064b	91	1421	20.4	+51 26	8.4	8.7	F2	2	..	38188i
42	4074	20.1	-45 26	10.0	9.0	A2	2	..	39930b	92	1422	20.4	+51 14	8.0	8.1	A5	4	..	38188i
43	2980	20.1	-51 48	5.93	6.2	B9	..	1,10	56,125	93	1602	20.4	+28 14	5.83	6.90	K2	7	R	38218i
44	1107	20.1	-60 18	8.5	9.2	Fo	5	..	40088b	94	1976	20.4	+ 3 49	8.4	9.4	Ko	2	..	38271i
45	836	20.1	-66 25	9.8	9.8	Ao	3	..	21452b	95	1965	20.4	+ 2 27	5.91	6.91	Ko	7	0,7	38207i
46	677	20.1	-71 12	5.44	5.42	B9	..	0, R	28,202	96	2474	20.4	- 7 33	9.5	9.5	Ao	3	..	19136b
47	1397	20.2	+45 56	8.9	9.2	F2	2	..	37704i	97	2508	20.4	- 9 28	7.78	7.73	B8	7	..	19136b
48	1746	20.2	+44 12	8.6	9.6	Ko	3	..	37704i	98	2511	20.4	-14 51	9.0	9.1	A3	3	..	19015b
49	1870	20.2	+42 26	8.5	8.5	Ao	3	..	37704i	99	2510	20.4	-14 59	6.72	6.80	A3	10	..	20857b
50	2101	20.2	+39 21	8.5	9.1	Go	2	..	37390i	100	2324	20.4	-18 26	8.6	8.9	F2	5	..	20857b



## THE HENRY DRAPER CATALOGUE.

71100

8<sup>h</sup> 20<sup>m</sup>.4

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	5429	20.4	- 27 31	9.6	9.0	Ao	3	..	40080b	51	1612	20.7	+ 27 16	6.30	6.36	A2	8	R	38218i
2	6105	20.4	- 29 35	10.8	9.8	Ao	2	..	40080b	52	1920	20.7	+ 24 52	7.10	7.18	A3	7	R	38635i
3	4962	20.4	- 33 10	8.9	9.0	Ao	2	..	12788b	53		20.7	+ 24 52	7.64	8.20	G			
4	4570	20.4	- 35 11	7.30	7.3	A2	8	0,2	13054b	54	2055	20.7	+ 8 20	8.9	9.4	F8	2	..	20710b
5	4289	20.4	- 39 28	8.6	8.8	Ao	2	..	13064b	55	2339	20.7	- 3 35	3.95	3.95	Ao	..	R	2493c
6	4080	20.4	- 41 20	9.2	9.4	G5	1	..	13064b	56	2351	20.7	- 11 34	10.2	10.2	Ao	2	..	19015b
7	3746	20.4	- 48 17	11.5	9.6	Ao	1	..	39930b	57	2513	20.7	- 12 17	9.9	9.9	Ao	1	..	19015b
8	2984	20.4	- 51 25	9.6	10.0	K2	2	..	24598b	58	2526	20.7	- 13 19	9.7	9.8	A5	2	..	19015b
9	1107	20.4	- 58 14	8.9	10.1	K5	2	..	40088b	59	2423	20.7	- 21 19	8.6	8.9	A5	4	..	18302b
10	418	20.5	+ 72 43	9.2	9.3	A2	2	..	38187i	60	5259	20.7	- 32 36	7.9	9.5	K5	1	..	12788b
11	1168	20.5	+ 59 10	8.4	9.0	Go	2	..	37676i	61	4244	20.7	- 43 23	10.2	9.6	Ao	4	..	24747b
12	1747	20.5	+ 44 29	8.9	9.9	K	1	..	37704i	62	4372	20.7	- 44 11	10.2	9.3	A5	2	..	13064b
13	1828	20.5	+ 34 39	7.72	7.72	Ao	5	..	38218i	63	1455	20.7	- 52 6	8.5	10.1	K5	3	..	24598b
14	2008	20.5	+ 19 10	8.6	9.8	K5	1	..	37605i	64	1617	20.7	- 56 49	8.0	8.5	F2	5	..	40088b
15	2053	20.5	+ 7 53	5.23	6.23	Ko	7	..	38156i	65	1108	20.7	- 60 29	9.7	10.7	Ko	1	..	40088b
16	2036	20.5	- 1 47	8.8	9.1	Fo	3	0,2	22751b	66	917	20.7	- 65 21	9.2	10.2	Ko	3	..	21452b
17	2565	20.5	- 2 48	8.7	9.1	F5	3	0,1	22751b	67	258	20.8	+ 79 52	8.85	9.19	F2	3	..	37493i
18	2512	20.5	- 9 57	8.6	9.7	K2	2	..	19136b	68	1822	20.8	+ 43 25	8.7	9.7	K	1	..	37704i
19	2349	20.5	- 11 34	10.6	10.7	A2	1	..	19015b	69	1798	20.8	+ 9 51	8.32	9.32	Ko	4	..	20710b
20	2438	20.5	- 16 28	9.2	9.3	A3	2	..	20857b	70	2340	20.8	- 3 10	8.4	8.7	Fo	3	..	38207i
21	6107	20.5	- 29 13	10.5	10.1	A2	1	..	40080b	71	2341	20.8	- 3 51	7.30	8.48	K5	3	0,2	22751b
22	4291	20.5	- 39 44	8.3	8.5	B9	7	1,4	24747b	72	2352	20.8	- 8 38	7.62	8.62	Ko	9	..	19136b
23	4198	20.5	- 42 14	8.4	8.0	B9	5	..	13064b	73	2511	20.8	- 10 28	9.2	9.3	A3	3	..	19015b
24	4122	20.5	- 46 39	9.8	9.9	K5	1	..	39930b	74	2513	20.8	- 14 16	9.9	10.0	A2	2	..	19015b
25	3889	20.5	- 47 55	10.5	9.4	Fo	1	..	39930b	75	7281	20.8	- 23 30	10.5	9.2	A	1	..	18302b
26	3307	20.5	- 50 19	9.0	9.3	Fo	5	..	24598b	76	7277	20.8	- 23 43	5.46	7.7	K5	..	0,8	56,125
27	2985	20.5	- 51 37	9.2	9.6	Ko	4	..	24598b	77	5990	20.8	- 29 0	9.4	9.2	Ao	2	..	40080b
28	1531	20.5	- 55 41	8.8	8.9	B9	4	..	40088b	78	6118	20.8	- 29 11	9.6	9.0	B9	2	..	40080b
29	1032	20.5	- 59 11	1.74	2.74	Ko	..	R	28,202	79	6021	20.8	- 31 25	9.3	8.7	Ao	2	..	12788b
30	838	20.5	- 59 11			B	..			80	5260	20.8	- 32 57	9.3	9.3	Ao	1	..	12788b
31	1603	20.6	+ 28 23	8.5	9.5	Ko	1	..	24527b	81	4376	20.8	- 44 55	7.74	8.5	K5	1	..	13038b
32	1965	20.6	+ 9 27	8.8	10.0	K5	1	..	38218i	82	3526	20.8	- 49 50	10.2	9.8	A2	2	..	24598b
33	2054	20.6	+ 8 9	8.8	9.1	Fo	5	..	20710b	83	1033	20.8	- 59 17	8.7	10.1	Ko	2	..	40088b
34	1952	20.6	+ 6 35	8.8	9.9	K2	2	..	20710b	84	1034	20.8	- 59 51	9.7	10.7	Ko	1	..	40088b
35	1967	20.6	+ 1 53	6.71	7.71	Ko	5	0,5	20710b	85	634	20.9	+ 65 36	8.9	9.9	K	2	E	37713i
36	2294	20.6	- 0 4	7.33	8.33	Ko	5	0,5	38207i	86	1170	20.9	+ 59 44	8.61	9.11	F8	2	..	37676i
37	2523	20.6	- 5 10	8.45	8.45	Ao	4	..	38271i	87	1823	20.9	+ 36 9	7.9	8.7	G5	3	..	37390i
38	2475	20.6	- 7 45	9.3	9.4	A3	3	..	19136b	88	1819	20.9	+ 15 2	8.5	8.5	Ao	4	..	38960i
39	2520	20.6	- 21 9	8.6	8.7	Ao	4	..	19136b	89	2296	20.9	+ 0 33	8.4	8.4	Ao	3	0,3	38207i
40	2262	20.6	- 22 50	5.65	5.71	A2	..	0,10	18302b	90	1990	20.9	- 0 56	8.5	8.9	F5	3	..	22751b
41	7269	20.6	- 23 22	6.81	7.6	F2	..	3,5-	56,125	91	2479	20.9	- 7 56	9.2	9.5	Fo	2	..	19136b
42	5434	20.6	- 27 44	11.3	9.3	A	1	..	56,125	92	2352	20.9	- 12 7	8.4	8.4	Ao	5	..	19015b
43	6112	20.6	- 29 29	10.1	9.5	A3	3	..	40080b	93	2440	20.9	- 16 40	8.2	9.4	K5	2	..	20857b
44	4083	20.6	- 41 22	9.7	9.4	A2	2	..	40080b	94	2485	20.9	- 17 20	9.7	9.8	A2	2	..	20857b
45	1496	20.6	- 57 34	8.2	7.9	Ao	6	..	13064b	95	2521	20.9	- 20 26	8.8	9.5	G5	2	..	18302b
46	420	20.7	+ 72 39	7.78	8.78	Ko	5	..	40088b	96	2522	20.9	- 20 44	6.00	6.2	F2	..	0,8	56,125
47	1398	20.7	+ 46 0	6.33	6.89	Go	8	..	38187i	97	2426	20.9	- 21 49	6.98	8.0	Ko	3	..	11036b
48	1732	20.7	+ 32 33	8.5	9.3	G5	2	..	37704i	98	6003	20.9	- 26 40	8.8	8.9	Ko	2	..	13072b
49	1612	20.7	+ 27 16	6.32	6.38	A2	8	R	38218i	99	5995	20.9	- 28 15	9.8	8.9	Ao	4	..	40080b
50										100	5994	20.9	- 28 39	9.0	8.6	Fo	5	..	40080b



## ANNALS OF HARVARD COLLEGE OBSERVATORY.

71200

8<sup>h</sup> 20<sup>m</sup>.9

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	6215	20.9	-30 47	9.0	8.9	A2	1	..	12788b	51	2526	21.2	-5 25	9.3	10.1	G5	2	..	19136b
2	4592	20.9	-36 31	10.6	9.5	A	1	..	13073b	52	2355	21.2	-8 11	6.88	7.16	Fo	10	..	19136b
3	4420	20.9	-38 27	9.3	9.4	Ao	3	..	24747b	53	2514	21.2	-10 12	6.56	6.62	A2	10	..	19015b
4	4091	20.9	-41 12	7.8	8.0	B9	4	..	8897b	54	2515	21.2	-15 7	8.06	8.06	Ao	5	0,7	20857b
5	1036	20.9	-59 12	8.8	8.9	Fo	5	..	40088b	55	6030	21.2	-31 37	6.70	6.9	B9	8	..	12788b
6	1016	20.9	-61 14	9.2	9.3	B5	2	..	40088b	56	2989	21.2	-52 3	11.5	10.1	G5	2	..	24598b
7	416	21.0	+73 2	7.90	9.08	K5	5	..	38187i	57	1621	21.2	-55 0	7.51	7.3	Fo	8	..	24598b
8	1709	21.0	+29 54	8.61	9.03	F5	2	..	38218i	58	1621	21.2	-56 17	9.0	10.3	Ma	..	..	M
9	1974	21.0	+4 49	8.31	8.37	A2	4	..	37654i	59	1400	21.3	+46 19	8.6	9.2	G	2	..	37704i
10	2480	21.0	-7 30	10.2	10.3	A3	1	..	19136b	60	2012	21.3	+19 35	8.4	8.7	Fo	4	..	37605i
11	2516	21.0	-10 4	8.76	9.04	Fo	3	..	19136b	61	1822	21.3	+15 8	8.4	9.4	Ko	1	..	38960i
12	2427	21.0	-21 15	8.6	9.2	Go	3	..	18302b	62	2057	21.3	+7 58	6.78	6.78	Ao	5	..	38156i
13	6046	21.0	-25 59	9.4	8.6	Ao	4	..	13072b	63	2337	21.3	-4 23	8.6	9.7	K2	1	..	22751b
14	4978	21.0	-33 15	8.9	9.2	F5	1	..	12788b	64	2527	21.3	-5 33	8.7	8.7	Ao	4	..	19136b
15	4597	21.0	-36 42	9.9	8.7	B9	2	..	13073b	65	2355	21.3	-11 40	8.4	9.2	G5	5	..	19015b
16	4212	21.0	-40 26	7.1	7.3	B3	7	..	8897b	66	2533	21.3	-13 21	8.7	8.7	Ao	4	..	19015b
17	4093	21.0	-41 45	9.3	9.4	A2	2	..	13064b	67	2517	21.3	-14 36	5.91	5.97	A2	7	..	8827b
18	4381	21.0	-44 6	9.8	9.3	B9	1	..	13064b	68	5274	21.3	-32 8	9.0	8.9	F5	2	..	12788b
19	1456	21.0	-52 39	10.0	10.0	Ao	2	..	24598b	69	4984	21.3	-34 5	8.3	8.6	Ao	3	..	12788b
20	1108	21.0	-58 12	9.5	10.7	K5	1	..	40088b	70	4305	21.3	-39 55	9.45	9.4	F5	3	..	24747b
21	919	21.0	-65 37	9.9	10.4	F8	2	..	21452b	71	4097	21.3	-41 6	7.9	9.4	K5	1	..	13064b
22	459	21.1	+71 22	7.7	8.2	F8	3	..	38187i	72	3911	21.3	-47 13	10.2	9.3	F8	1	..	39930b
23	470	21.1	+68 52	6.89	6.89	Ao	8	..	37713i	73	922	21.3	-65 47	9.5	9.8	F2	3	..	21452b
24	1143	21.1	+57 1	7.26	8.26	Ko	5	..	37676i	74	150	21.3	-85 23	9.5	10.7	K5	2	..	22238b
25	1253	21.1	+53 32	8.8	9.8	K	1	..	38188i	75	1255	21.4	+53 18	8.8	9.8	Ko	1	..	38188i
26	1542	21.1	+50 2	7.27	7.55	Fo	6	0,5	38188i	76	1825	21.4	+36 27	7.68	7.68	Ao	5	..	37390i
27	1578	21.1	+47 37	8.0	8.6	Go	5	..	37704i	77	1814	21.4	+30 53	8.0	8.3	F2	4	..	38218i
28	1970	21.1	+2 48	7.6	8.6	Ko	3	0,3	38207i	78	1991	21.4	-1 6	8.8	9.2	F5	1	..	22751b
29	2525	21.1	-5 12	8.80	9.80	Ko	2	..	19136b	79	2591	21.4	-6 9	8.6	9.8	K5	2	..	19136b
30	2353	21.1	-8 27	7.8	8.8	Ko	4	..	19136b	80	2482	21.4	-7 40	8.2	8.3	A5	7	..	19136b
31	2442	21.1	-17 7	6.44	7.44	Ko	10	..	20857b	81	2356	21.4	-8 53	8.7	9.0	F2	2	..	19136b
32	5447	21.1	-27 41	8.8	9.0	A3	2	..	40080b	82	2400	21.4	-19 40	8.8	9.2	A2	2	..	18302b
33	5998	21.1	-29 3	10.1	9.2	Ao	1	..	40080b	83	6056	21.4	-25 31	8.8	8.9	A3	3	..	13072b
34	5268	21.1	-32 16	8.6	9.2	F8	1	..	12788b	84	6228	21.4	-31 0	8.6	8.4	B9	2	..	12788b
35	4586	21.1	-35 17	8.9	9.2	G5	1	..	13054b	85	4988	21.4	-34 3	7.5	8.4	G5	3	..	12788b
36	4089	21.1	-45 34	8.8	8.8	Ko	3	..	39930b	86	4098	21.4	-41 43	8.9	8.9	A3	3	..	13064b
37	4128	21.1	-46 40	10.0	9.0	B9	2	..	39930b	87	3914	21.4	-47 27	10.5	9.6	Ao	1	..	39930b
38	3528	21.1	-49 7	8.5	8.6	B9	5	..	24598b	88	3532	21.4	-49 28	10.5	10.0	Ao	2	..	24598b
39	1457	21.1	-52 14	8.7	9.8	K5	4	..	24598b	89	3319	21.4	-51 3	10.0	9.8	A5	3	..	24598b
40	920	21.1	-65 12	8.27	8.7	Ao	6	0,3	21452b	90	1460	21.4	-52 53	9.4	10.4	Ko	3	R	24598b
41	842	21.1	-66 5	9.7	10.1	F5	2	..	19155b	91	1037	21.4	-59 51	9.0	9.5	A2	2	..	40088b
42	840	21.1	-67 1	8.1	9.2	K2	4	..	24527b	92	1606	21.5	+27 53	8.7	9.0	F2	2	..	38218i
43	507	21.1	-76 36	4.08	4.50	F5	..	0,9 R	28,202	93	2014	21.5	+19 37	9.1	9.7	Go	2	..	37605i
44	1228	21.2	+54 11	7.02	7.58	Go	6	..	38188i	94	1968	21.5	+9 47	9.12	9.12	Ao	3	..	20710b
45	1399	21.2	+46 36	7.01	8.01	Ko	6	..	37704i	95	1992	21.5	-0 23	8.4	9.0	Go	1	..	22751b
46	1873	21.2	+42 2	8.4	8.8	F5	3	..	37704i	96	2572	21.5	-2 25	8.2	9.2	Ko	3	..	38207i
47	2055	21.2	+40 9	9.1	10.1	Ko	2	..	37390i	97	2345	21.5	-3 40	5.41	5.55	A5	6	5,9	2346b
48	1925	21.2	+24 3	8.6	9.4	G5	1	..	38635i	98	2518	21.5	-9 10	9.2	9.5	F	1	..	19136b
49	1958	21.2	+23 41	8.9	9.5	Go	1	..	38635i	99	2333	21.5	-19 0	9.3	9.6	Fo	1	..	20857b
50	1912	21.2	+13 0	5.75	7.10	Ma	7	..	37628i	100	2430	21.5	-22 3	9.2	9.2	G	1	..	18302b

## THE HENRY DRAPER CATALOGUE.

71300

8<sup>h</sup> 21<sup>m</sup>.5

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	4310	21.5	-39 51	8.9	8.8	Ao	3	0,3	13064b	51	1538	21.8	-55 38	8.8	10.0	K5	1	..	40088b
2	4219	21.5	-42 27	6.20	6.1	B5	5	2,8	8888b	52	1544	21.9	+50 45	8.6	9.6	Ko	1	..	38188i
3	4258	21.5	-43 48	9.6	9.1	A2	3	..	24747b	53	1864	21.9	+37 20	7.76	8.76	Ko	2	..	37390i
4	4259	21.5	-43 59	8.4	8.2	Bo	3	..	13064b	54	1834	21.9	+33 51	7.62	8.62	Ko	3	..	38218i
5	4138	21.5	-46 51	10.2	9.3	Ao	2	..	39930b	55	1958	21.9	+6 37	8.8	8.8	Ao	3	E	38271i
6	1658	21.5	-53 53	9.1	8.9	B8	5	..	24598b	56	2341	21.9	-4 19	9.2	9.2	Ao	2	..	22751b
7	1623	21.5	-54 9	9.4	10.0	Go	2	..	24598b	57	2358	21.9	-11 27	8.0	8.8	G5	6	..	19015b
8	897	21.5	-69 9	8.1	9.5	Ma	3	0,2	21452b	58	2522	21.9	-12 35	9.3	9.9	Go	1	..	19015b
9	1960	21.6	+23 29	7.9	7.9	Ao	7	..	37605i	59	2540	21.9	-13 47	9.5	9.9	F5	2	..	19015b
10	1975	21.6	+7 33	6.95	7.01	A2	4	..	38156i	60	2268	21.9	-22 45	9.0	8.9	K5	2	..	18302b
11	2491	21.6	-17 50	9.0	9.1	A2	3	..	20857b	61	7305	21.9	-23 17	8.2	8.9	G5	4	..	18302b
12	2403	21.6	-19 17	9.0	9.5	K5	1	..	20857b	62	4315	21.9	-39 48	9.7	8.9	B9	2	1,2	13064b
13	2432	21.6	-22 3	9.5	9.2	Ao	2	..	18302b	63	4224	21.9	-42 51	10.9	9.7	Ao	3	..	24747b
14	2265	21.6	-22 23	9.2	8.6	A2	4	..	18302b	64	3772	21.9	-48 21	8.6	8.4	B9	4	..	13038b
15	4613	21.6	-36 32	8.7	9.5	K5	1	..	13073b	65	3538	21.9	-49 47	10.2	10.0	A2	2	2,1	24598b
16	3919	21.6	-47 8	9.2	9.0	Fo	2	..	39930b	66	1463	21.9	-52 19	8.9	10.0	K2	4	..	24598b
17	3534	21.6	-49 59	8.88	8.4	Ao	7	..	24598b	67	1664	21.9	-53 25	7.6	7.3	Ao	9	..	24598b
18	1659	21.6	-53 12	8.8	8.6	Ao	7	..	24598b	68	1539	21.9	-55 28	7.1	8.5	K5	4	..	24598b
19	1109	21.6	-60 41	9.9	10.7	G5	2	..	40088b	69	1054	22.0	+61 3	3.47	4.03	Go	..	R	1666c
20	952	21.6	-63 25	8.7	9.9	K5	2	..	13025b	70	1727	22.0	+16 13	9.1	10.1	Ko	1	..	38960i
21	682	21.6	-71 39	7.6	7.9	Fo	8	..	24527b	71	1893	22.0	+14 19	8.6	8.9	F2	2	..	38960i
22	1827	21.7	+36 16	8.1	8.7	G	1	..	37390i	72	1918	22.0	+13 6	8.4	9.4	Ko	1	..	38960i
23	1826	21.7	+36 13	6.94	7.94	Ko	5	..	37390i	73	1972	22.0	+9 41	9.8	9.8	Ao	2	..	20710b
24	1842	21.7	+21 47	8.7	9.7	Ko	2	..	38635i	74	2529	22.0	-5 53	7.8	8.9	K2	4	..	19136b
25	1976	21.7	+7 46	9.5	10.0	F8	2	..	20710b	75	2485	22.0	-8 9	8.4	8.5	A2	6	..	19136b
26	2484	21.7	-7 46	8.6	9.1	F8	6	..	19136b	76	2518	22.0	-10 42	9.2	9.2	Ao	3	..	19015b
27	2519	21.7	-12 26	9.7	9.8	A2	2	..	19015b	77	2524	22.0	-12 12	5.68	6.68	Ko	10	..	19015b
28	2537	21.7	-13 40	9.9	10.0	A3	1	..	19015b	78	2541	22.0	-13 34	9.5	9.8	Fo	2	..	19015b
29	2538	21.7	-13 50	10.2	10.3	A3	1	..	19015b	79	2338	22.0	-18 28	9.3	10.3	Ko	1	..	20857b
30	2432	21.7	-15 45	8.8	9.8	Ko	1	..	20857b	80	2337	22.0	-19 0	9.3	9.4	A2	4	..	20857b
31	2448	21.7	-16 53	9.3	10.3	Ko	2	..	24583b	81	6049	22.0	-31 51	7.05	7.4	Fo	6	..	12788b
32	2493	21.7	-17 45	8.2	9.4	K5	2	..	20857b	82	4687	22.0	-37 20	8.6	8.6	Fo	3	..	13054b
33	6026	21.7	-26 7	9.3	9.3	G5	1	..	44434b	83	4230	22.0	-40 39	8.4	8.5	Ao	6	0,5	13064b
34	6145	21.7	-29 36	7.72	8.6	G5	3	..	12788b	84	4226	22.0	-42 20	9.8	9.1	A2	2	..	13064b
35	4223	21.7	-40 55	9.3	9.7	G5	2	..	24747b	85	3773	22.0	-48 47	8.6	8.4	Ao	4	..	39930b
36	4221	21.7	-43 3	8.0	7.3	B3	6	..	13064b	86	3774	22.0	-48 50	8.0	8.4	G5	3	..	39930b
37	3921	21.7	-47 23	9.8	9.6	G5	1	..	39930b	87	365	22.1	+73 56	8.6	9.4	G5	3	..	38187i
38	3537	21.7	-49 39	9.6	9.3	A2	4	0,2	24598b	88	2058	22.1	+40 15	8.5	9.3	G5	2	..	37390i
39	1110	21.7	-58 9	9.6	9.9	Fo	2	..	40088b	89	1835	22.1	+34 2	7.27	8.34	K2	4	..	38218i
40	1111	21.7	-60 49	8.4	8.9	A3	5	..	40088b	90	2350	22.1	-3 54	9.2	9.2	Ao	3	..	22751b
41	1828	21.8	+36 43	8.3	9.3	Ko	1	..	37390i	91	2359	22.1	-8 27	9.3	9.6	Fo	1	..	19136b
42	1755	21.8	+29 24	9.1	9.7	G	2	..	38637i	92	2521	22.1	-10 35	9.2	9.2	Ao	2	..	19015b
43	1993	21.8	-0 54	7.8	8.8	Ko	5	..	22751b	93	2361	22.1	-11 56	8.4	9.4	Ko	4	..	19015b
44	6065	21.8	-25 25	9.0	8.6	Ao	5	..	13072b	94	2530	22.1	-12 33	8.4	9.6	K5	2	..	19015b
45	6030	21.8	-27 3	8.8	8.4	Ao	4	1,2	13072b	95	2542	22.1	-13 44	9.1	10.1	Ko	2	..	19015b
46	5000	21.8	-33 57	8.9	9.2	Ko	1	..	13046b	96	2436	22.1	-15 34	8.6	8.7	A2	3	..	20857b
47	4600	21.8	-35 23	9.2	9.2	F	1	..	13054b	97	2450	22.1	-16 55	9.9	10.4	F8	2	..	24583b
48	4439	21.8	-38 42	9.3	9.2	A2	5	..	24747b	98	2438	22.1	-21 14	8.6	9.2	Ko	2	..	18302b
49	4314	21.8	-39 33	8.4	8.8	Ao	3	2,2	13073b	99	6035	22.1	-26 49	6.92	8.0	F5	6	..	43040b
50	3771	21.8	-48 42	8.2	9.5	K2	2	..	39930b	100	6031	22.1	-29 3	10.1	9.3	Ao	1	..	13072b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

71400

8<sup>h</sup> 22<sup>m</sup>.1

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	4147	22.1	-46 39	10.2	9.6	B9	1	..	39930b	51	1731	22.4	+16 38	8.5	8.6	A2	5	..	38960i
2	3776	22.1	-48 48	8.6	8.7	Fo	3	..	39930b	52	2058	22.4	+ 8 29	9.5	9.9	F5	2	..	20710b
3	3775	22.1	-49 2	9.0	9.0	Fo	3	..	39930b	53	2595	22.4	- 6 19	10.2	10.3	A2	2	..	19136b
4	1464	22.1	-52 21	8.9	9.5	Go	4	..	24598b	54	2526	22.4	-11 5	9.3	10.3	Ko	1	..	19015b
5	1627	22.1	-55 2	6.81	6.6	B8	10	..	24598b	55	2500	22.4	-17 50	8.8	9.6	G5	2	..	20857b
6	765	22.1	-70 7	9.0	9.1	A5	3	..	19155b	56	2344	22.4	-18 38	9.1	9.4	Fo	1	..	20857b
7	1947	22.2	+18 23	7.85	8.27	F5	5	3,5	37617i	57	6081	22.4	-25 38	9.4	9.5	Ko	1	..	44434b
8	1729	22.2	+16 22	8.6	9.4	G5	1	..	38960i	58	5296	22.4	-32 38	8.0	8.9	K2	1	..	12788b
9	1978	22.2	+ 7 50	9.5	9.8	Fo	4	..	20710b	59	4119	22.4	-41 50	5.30	5.13	B3	..	0, R	56, 125
10	1972	22.2	+ 5 1	8.46	8.54	A3	3	..	38271i	60	3545	22.4	-50 1	10.0	10.0	F2	3	..	24598b
11	1977	22.2	+ 4 0	8.0	9.0	Ko	1	..	38271i	61	1627	22.4	-56 40	9.0	9.2	F2	2	..	40088b
12	2362	22.2	- 9 5	8.4	9.6	K5	1	..	19136b	62	2303	22.5	+ 0 50	8.19	8.69	F8	3	..	37654i
13	2531	22.2	-12 26	9.5	9.5	A	1	..	19015b	63	2577	22.5	- 2 44	9.0	9.6	Go	2	..	22751b
14	2439	22.2	-15 44	9.1	9.1	Ao	2	..	20857b	64	2596	22.5	- 6 14	9.5	10.3	G5	2	..	19136b
15	2496	22.2	-17 11	9.7	10.7	Ko	1	..	24583b	65	2441	22.5	-15 19	7.80	8.98	K5	4	0,3	19015b
16	2497	22.2	-17 51	7.36	7.36	Ao	9	..	20857b	66		22.5	-23 29			A2			
17	2340	22.2	-18 32	8.0	8.0	B9	8	..	20857b	67	7316	22.5	-23 29	8.2	8.9	K	3	R	18302b
18	2271	22.2	-22 46	9.2	9.5	A	3	R	18302b	68	4631	22.5	-36 9	9.2	9.2	Fo	2	..	13073b
19		22.2	-22 46	9.2	9.2	K				69	4330	22.5	-39 22	9.7	9.2	Ao	1	..	13064b
20	4326	22.2	-39 14	10.1	9.4	Ao	3	..	24747b	70	4276	22.5	-43 42	8.9	7.8	B8	5	..	13064b
21	4235	22.2	-40 15	10.6	9.4	A2	2	..	24747b	71	3327	22.5	-50 36	9.2	10.0	K2	2	..	24598b
22	4114	22.2	-41 7	9.0	9.1	Fo	3	..	13064b	72	1628	22.5	-56 35	8.8	9.1	Ao	3	..	40088b
23	4396	22.2	-44 17	9.8	9.6	Ko	3	..	24747b	73	1116	22.5	-58 48	9.7	10.1	F5	1	..	40088b
24	1113	22.2	-60 31	9.8	9.9	A5	2	..	40088b	74	1927	22.6	+24 52	8.21	8.27	A2	4	..	38635i
25	957	22.2	-63 25	9.1	10.2	K2	3	..	40095b	75	1844	22.6	+12 1	7.6	8.7	K2	5	..	37628i
26	865	22.2	-64 52	9.6	10.1	F8	2	..	19155b	76	2304	22.6	+ 0 14	8.6	9.0	F5	2	..	37654i
27	1313	22.3	+52 23	8.6	9.2	Go	2	..	38188i	77	2046	22.6	- 2 7	8.92	10.10	K5	1	..	22751b
28	1844	22.3	+21 29	6.97	7.75	G5	5	0,7	37617i	78	2348	22.6	- 4 22	9.3	9.4	A3	1	..	22751b
29	1825	22.3	+15 25	8.0	8.1	A2	4	..	38960i	79	2347	22.6	- 4 49	7.30	7.86	Go	9	..	19136b
30	1978	22.3	+ 2 46	8.6	9.0	F5	2	..	37654i	80	2533	22.6	-12 15	10.2	10.2	Ao	2	..	19015b
31	2095	22.3	+ 1 9	7.8	8.4	Go	5	..	37654i	81	2451	22.6	-16 46	10.4	10.8	F5	1	..	24583b
32	2353	22.3	- 3 12	8.4	8.4	Ao	4	..	38207i	82	2345	22.6	-18 53	9.3	9.4	A2	2	..	24583b
33	2530	22.3	- 6 5	6.48	6.90	F5	10	..	19136b	83	6175	22.6	-29 27	9.0	9.8	K5	1	..	13072b
34	2525	22.3	-11 3	9.5	9.6	A2	1	..	19015b	84	6177	22.6	-29 37	9.6	8.9	Ao	2	..	13046b
35	2362	22.3	-11 31	9.5	10.1	Go	3	..	19015b	85	5301	22.6	-32 53	7.8	9.2	K5	1	..	12788b
36	2342	22.3	-18 25	9.0	9.1	A2	2	..	20857b	86	4463	22.6	-38 37	9.7	8.0	B8	5	..	13073b
37	5470	22.3	-27 31	9.8	9.0	Ao	2	..	13072b	87		22.6	-38 44	6.68		Ao			
38	6162	22.3	-30 3	9.14	9.0	F2	2	..	13046b	88	4462	22.6	-38 44	7.28	6.1		5	0,9 R	42221b
39	4327	22.3	-39 34	8.6	8.2	B9	6	0,5	13064b	89	4240	22.6	-40 28	7.5	8.5	Ko	4	2,3	13064b
40	4236	22.3	-40 19	10.3	10.3	A2	3	..	24747b	90	4240	22.6	-42 58	10.9	9.7	B9	3	..	24747b
41	4118	22.3	-41 37	10.3	9.4	A	1	..	13064b	91	1543	22.6	-55 9	6.74	6.7	B8	10	..	24598b
42	4117	22.3	-42 4	9.3	9.7	G5	2	..	24747b	92	924	22.6	-65 29	9.9	10.2	Fo	2	..	19155b
43	4399	22.3	-44 27	9.6	9.4	Ko	3	..	24747b	93	1589	22.7	+45 8	8.5	9.5	K	1	..	37704i
44	4152	22.3	-46 19	9.0	8.2	Ao	2	..	13038b	94	2106	22.7	+39 13	7.9	7.9	Ao	5	..	37390i
45	3930	22.3	-47 13	10.9	10.1	A	1	..	39930b	95	1838	22.7	+34 4	8.1	8.5	F5	3	..	38611i
46	3779	22.3	-48 35	9.8	9.8	Go	1	..	39930b	96	1931	22.7	+24 28	6.06	6.20	A5	8	0,9	38635i
47	1039	22.3	-59 37	8.3	9.6	Ko	3	..	40088b	97	1974	22.7	+ 5 9	7.8	8.6	G5	3	..	37654i
48	1114	22.3	-60 19	8.8	9.9	Ko	2	..	40088b	98	1996	22.7	- 1 4	8.6	9.1	F8	2	..	22751b
49	1427	22.4	+51 31	8.6	8.7	A2	3	..	38188i	99	2356	22.7	- 4 5	6.68	6.96	Fo	5	2,5	2346b
50	1428	22.4	+50 58	8.5	9.0	F8	2	..	38188i	100	2366	22.7	- 8 13	9.2	9.2	A	3	..	19136b

## THE HENRY DRAPER CATALOGUE.

71500

8<sup>h</sup> 22<sup>m</sup>.7

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
		m.	°									m.	°						
1	2529	22.7	-10 37	9.7	9.7	Ao	1	..	19015b	51	1040	22.9	-59 55	9.56	9.8	Fo	1	..	40088b
2	2530	22.7	-11 1	9.5	9.8	Fo	2	..	19015b	52	129	22.9	-87 37	9.0	10.0	Ko	2	..	22578b
3	2453	22.7	-16 13	9.2	10.2	Ko	2	..	24583b	53	472	23.0	+69 39	6.44	7.44	Ko	7	..	37713i
4	2276	22.7	-22 55	7.6	7.3	F5	3	0.3	43040b	54	1231	23.0	+54 27	6.68	6.66	B9	8	..	38188i
5	6051	22.7	-26 36	9.0	8.7	F8	3	..	13072b	55	1899	23.0	+14 33	5.90	5.96	A2	9	..	37628i
6	4814	22.7	-34 20	8.9	8.6	Ao	3	..	12788b	56	1981	23.0	+7 7	9.1	9.6	F8	3	..	20710b
7	4125	22.7	-41 40	9.9	9.7	A5	2	..	24747b	57	1982	23.0	+7 2	8.0	8.0	Ao	4	E	38156i
8	4241	22.7	-42 32	10.0	9.4	B8	3	..	24747b	58	2097	23.0	+1 14	8.6	9.2	Go	2	..	22751b
9	3937	22.7	-47 26	9.8	9.0	B9	2	..	39930b	59	1998	23.0	-0 14	9.08	9.64	Go	1	..	22751b
10	3004	22.7	-51 24	5.23	5.06	B3	..	5.9	56,125	60	2537	23.0	-5 20	9.2	9.6	F5	2	..	19136b
11	1117	22.7	-58 6	8.9	9.0	F8	5	R	40088b	61	2538	23.0	-5 36	9.2	10.2	Ko	2	..	19136b
12	2059	22.8	+8 12	9.1	9.7	Go	1	..	20710b	62	2535	23.0	-5 43	9.2	10.2	Ko	1	..	19136b
13	1980	22.8	+7 29	8.4	9.4	Ko	6	..	20710b	63	2602	23.0	-6 34	9.3	9.7	F5	1	..	19136b
14	1979	22.8	+7 19	8.6	9.8	K5	1	..	20710b	64	2601	23.0	-6 57	9.0	9.1	A5	2	..	19136b
15	1983	22.8	+3 32	7.5	8.5	Ko	5	..	37654i	65	2491	23.0	-7 45	8.6	9.8	K5	1	..	19136b
16	2350	22.8	-4 15	9.0	10.2	K5	1	..	22751b	66	2369	23.0	-8 51	9.2	9.5	F2	2	..	19136b
17	2367	22.8	-8 19	9.1	9.2	A5	3	..	19136b	67	2537	23.0	-12 27	9.0	9.5	F8	2	..	19015b
18	2526	22.8	-14 36	6.55	6.43	B5	6	..	8827b	68	2445	23.0	-15 38	8.7	9.7	Ko	2	E	20857b
19	2443	22.8	-22 7	9.2	9.2	Go	2	..	18302b	69	2537	23.0	-20 40	8.6	8.4	Ao	5	..	18302b
20	2278	22.8	-23 7	7.22	8.0	K5	3	3.3	43040b	70	6058	23.0	-28 26	10.1	9.0	A2	1	..	13072b
21	7320	22.8	-23 40	8.8	9.2	Ko	2	..	18302b	71	6185	23.0	-29 25	9.8	9.2	Ao	1	..	13072b
22	5484	22.8	-27 59	9.6	8.9	F8	1	..	13072b	72	4821	23.0	-34 16	7.9	8.0	A2	3	..	12788b
23	6048	22.8	-28 54	6.57	6.9	B9	7	..	43040b	73	4131	23.0	-41 42	10.8	9.7	Ao	2	..	24747b
24	6067	22.8	-31 42	8.0	8.9	Ko	2	..	12788b	74	4129	23.0	-45 55	10.0	9.6	Ko	1	..	39930b
25	4334	22.8	-39 49	10.1	9.1	Ao	2	1.2	13064b	75	3949	23.0	-47 17	9.6	10.1	K5	1	..	39930b
26	4335	22.8	-40 4	9.60	9.2	B9	2	1.1	13064b	76	694	23.0	-73 5	5.40	5.46	A2	..	R	56,125
27	4245	22.8	-40 54	9.2	8.6	Ao	3	0.3	13073b	77	1841	23.1	+34 36	8.1	8.2	A2	3	..	38611i
28	4127	22.8	-41 49	7.9	7.7	B3	6	..	13064b	78	1818	23.1	+31 8	9.1	9.4	Fo	3	..	38637i
29	3942	22.8	-47 7	9.6	9.9	Ko	1	..	39930b	79	2549	23.1	-13 16	7.6	8.8	K5	3	..	19015b
30	1469	22.8	-52 21	9.0	10.0	Ko	3	..	24598b	80	2446	23.1	-15 58	8.4	8.4	Ao	7	E	20857b
31	1631	22.8	-54 26	9.9	9.9	Ao	2	..	24598b	81	2538	23.1	-20 31	6.44	6.8	Ao	9	..	18302b
32	693	22.8	-72 38	8.0	8.0	Ao	6	0.5	24527b	82	7329	23.1	-23 51	9.6	9.2	Fo	3	..	18302b
33	220	22.9	+82 57	8.6	9.6	Ko	1	..	38331i	83	6075	23.1	-31 51	6.81	7.6	G5	6	..	12788b
34	1136	22.9	+60 15	7.06	7.56	F8	6	0.5	37705i	84	4643	23.1	-36 21	7.5	8.9	K5	2	..	13054b
35	1590	22.9	+45 17	8.6	8.9	Fo	2	..	37704i	85	4293	23.1	-43 37	9.2	9.0	A2	2	..	13064b
36	1876	22.9	+42 49	8.6	9.6	Ko	2	..	37704i	86	4132	23.1	-45 44	10.2	9.6	A2	1	..	39930b
37	1703	22.9	+33 2	6.60	6.60	Ao	7	..	38218i	87	3789	23.1	-48 6	7.5	7.2	Fo	3	..	8952b
38	2599	22.9	-6 54	7.80	8.98	K5	3	..	19136b	88	3790	23.1	-48 35	9.6	9.6	F5	2	..	39930b
39	2548	22.9	-13 31	9.2	10.3	K2	2	..	19015b	89	3013	23.1	-51 40	10.0	9.5	A5	5	..	24598b
40	2527	22.9	-14 53	9.9	10.0	A2	3	..	24583b	90	1632	23.1	-56 26	8.4	8.8	F5	4	..	40088b
41	6069	22.9	-31 10	8.0	8.1	A2	3	..	12788b	91	768	23.1	-70 43	8.1	8.5	F5	2	..	24527b
42	5023	22.9	-33 51	7.53	8.6	Ko	3	..	12788b	92	2107	23.2	+39 39	8.7	9.7	Ko	1	..	37390i
43	4630	22.9	-35 11	9.05	9.8	A2	3	..	13073b	93	1842	23.2	+34 27	8.7	9.2	F8	2	..	38611i
44	4248	22.9	-40 52	7.5	7.9	B9	6	0.7	13064b	94	1759	23.2	+29 49	8.33	8.33	Ao	5	..	38218i
45	4244	22.9	-42 18	10.5	9.7	Ao	3	..	24747b	95	1983	23.2	+7 19	7.8	8.2	F5	5	0.3	20710b
46	3334	22.9	-50 54	9.2	9.8	K2	3	..	24598b	96	1962	23.2	+6 23	8.6	9.6	Ko	4	..	20710b
47	3010	22.9	-51 12	10.2	10.1	K2	1	..	24598b	97	2305	23.2	+0 36	7.5	8.5	Ko	4	..	37654i
48	3009	22.9	-51 41	9.8	10.1	Ko	2	..	24598b	98	2603	23.2	-6 19	9.2	10.5	F2	3	..	19136b
49	1544	22.9	-55 25	7.2	7.1	A2	9	..	24598b	99	2531	23.2	-11 9	9.3	9.9	Go	2	..	19015b
50	1511	22.9	-57 11	8.8	8.9	F8	4	..	40088b	100	2364	23.2	-12 8	9.5	9.5	Ao	3	..	19015b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

71600

8<sup>h</sup> 23<sup>m</sup>.2

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	2455	23.2	-16 48	9.7	10.3	Go	2	..	24583b	51	4137	23.4	-45 15	9.6	9.1	Ao	4	..	39930b
2	6059	23.2	-26 13	8.8	9.0	A2	2	..	13072b	52	4140	23.4	-45 26	9.6	9.1	Ao	3	..	39930b
3	5493	23.2	-27 21	9.6	8.9	A3	2	..	13072b	53	4171	23.4	-46 36	10.5	9.6	Ao	2	..	39930b
4	6062	23.2	-28 23	10.1	9.3	Ao	1	..	13072b	54	3016	23.4	-51 55	9.6	9.3	Ao	5	..	24598b
5	4646	23.2	-36 20	9.3	8.9	A	1	..	13073b	55	1636	23.4	-54 28	8.7	9.2	Ko	3	..	24598b
6	4343	23.2	-39 5	7.9	8.2	B9	5	0,5	13064b	56	1636	23.4	-56 29	9.5	9.5	Ao	3	..	40088b
7	4250	23.2	-42 12	7.4	7.6	A2	4	0,8	8897b	57	341	23.5	+75 31	8.22	8.64	F5	5	0,5	38187i
8	4252	23.2	-42 22	9.6	10.4	A3	3	E	24747b	58	1283	23.5	+55 16	7.56	7.56	Ao	6	0,5	38188i
9	4251	23.2	-43 5	7.7	8.1	B2	6	..	13064b	59	1546	23.5	+50 37	8.0	8.5	F8	4	..	38188i
10	3550	23.2	-49 37	9.0	10.0	K5	1	..	39930b	60	1592	23.5	+45 27	8.5	8.9	F5	2	..	37704i
11	1119	23.2	-58 20	9.0	9.3	F2	3	..	40088b	61	1981	23.5	+ 4 39	7.90	8.90	Ko	3	..	37654i
12	1116	23.2	-60 14	9.8	10.1	Fo	1	..	40088b	62	2308	23.5	+ 0 30	8.8	9.4	Go	1	..	22751b
13	902	23.2	-69 55	7.07	8.0	K2	4	..	24527b	63	2581	23.5	- 2 11	6.29	6.57	Fo	6	0,6	2346b
14	1126	23.3	+58 16	8.9	9.5	Go	2	..	37676i	64	2495	23.5	- 7 53	8.0	9.2	K5	3	..	19136b
15	2360	23.3	- 3 58	8.2	8.5	Fo	5	..	22751b	65	2374	23.5	- 8 29	6.48	7.48	Ko	9	..	19136b
16	2604	23.3	- 6 25	9.2	10.0	G5	2	..	19136b	66	2545	23.5	-12 18	9.3	9.3	Ao	3	..	19015b
17	2457	23.3	-16 33	8.0	9.0	Ko	5	E	20857b	67	2543	23.5	-12 55	8.6	8.7	A2	6	..	19015b
18	2505	23.3	-18 2	9.7	9.8	A2	1	..	24583b	68	6971	23.5	-24 34	7.56	8.1	K2	4	..	13072b
19	6968	23.3	-24 46	7.6	8.3	Ao	6	..	13072b	69	6289	23.5	-30 19	8.1	9.0	G5	1	..	13046b
20	6966	23.3	-25 1	9.6	9.2	Ao	1	..	13072b	70	4828	23.5	-34 22	7.4	8.9	K5	1	..	12788b
21	5496	23.3	-27 57	7.9	8.6	Ko	3	..	13072b	71	4350	23.5	-39 36	9.9	9.4	Ao	1	..	13064b
22	6079	23.3	-31 21	6.28	7.3	Ko	7	..	12788b	72	R	23.5	-48 4	9.1	9.1	B8	1	..	39930b
23	5032	23.3	-33 8	8.6	9.2	G5	1	..	13046b	73	3797	23.5	-48 22	8.4	9.2	Ko	3	..	39930b
24	4648	23.3	-36 36	7.61	8.7	K5	3	..	13054b	74	3552	23.5	-49 42	9.0	9.8	Ko	1	..	39930b
25	4711	23.3	-37 37	7.80	8.7	K2	3	..	13054b	75	1120	23.5	-58 37	10.1	10.1	A	1	..	40088b
26	4136	23.3	-41 39	10.3	10.0	Ao	2	..	24747b	76	174	23.5	-84 8	8.0	9.4	Ma	4	..	22238b
27	4253	23.3	-42 33	9.8	8.8	B8	2	..	13064b	77	1233	23.6	+54 25	8.8	9.2	F5	3	..	38188i
28	4413	23.3	-44 31	9.4	8.4	Ao	3	1,5	13064b	78	1410	23.6	+46 37	8.24	9.24	Ko	2	..	38625i
29	3952	23.3	-47 29	10.5	9.6	Ao	1	..	39930b	79	1819	23.6	+31 43	8.3	8.7	F5	2	..	38637i
30	3951	23.3	-47 46	7.5	7.5	Ao	3	..	8952b	80	2095	23.6	+20 45	8.8	9.3	F8	3	2,2	10654m
31	3953	23.3	-47 51	7.9	9.0	K2	1	..	39930b	81	1925	23.6	+12 53	8.0	9.0	Ko	4	..	37628i
32	1634	23.3	-54 25	9.4	9.4	Ao	2	..	24598b	82	2606	23.6	- 7 1	8.4	9.4	Ko	3	..	19136b
33	1635	23.3	-56 29	9.7	9.7	Ao	2	..	40088b	83	2529	23.6	- 9 54	8.4	8.4	Ao	3	..	19136b
34	1513	23.3	-57 48	7.0	6.7	B5	3	4,10	42241b	84	2546	23.6	-12 20	8.6	9.0	F5	5	..	19015b
35	1018	23.3	-62 47	9.3	10.1	G5	2	..	40095b	85	2532	23.6	-14 15	8.6	9.1	F8	5	..	19015b
36	1868	23.4	+37 24	8.1	8.5	F5	3	..	37390i	86	2507	23.6	-17 22	8.5	9.5	Ko	5	..	24583b
37	1831	23.4	+35 18	8.07	8.13	A2	2	E	37390i	87	2510	23.6	-17 42	9.1	10.5	Ma	2	..	24583b
38	1741	23.4	+32 24	7.96	8.96	Ko	1	..	38218i	88	6109	23.6	-25 48	6.64	7.1	A2	8	..	43040b
39	1963	23.4	+ 6 28	8.4	9.4	Ko	3	..	20710b	89	6201	23.6	-29 6	9.4	8.9	A2	3	..	13072b
40	2102	23.4	+ 1 35	7.41	7.83	F5	7	..	37654i	90	6087	23.6	-31 40	7.8	8.9	K2	3	..	12788b
41	2373	23.4	- 8 24	9.0	10.0	Ko	2	..	19136b	91	5320	23.6	-32 22	8.0	9.2	Ko	1	..	12788b
42	2535	23.4	-11 4	9.3	9.4	A3	3	..	19015b	92	4261	23.6	-40 45	8.6	9.1	Ko	1	2,1	13064b
43	2460	23.4	-16 14	9.9	10.7	G5	1	..	24583b	93	4296	23.6	-43 32	9.6	9.0	B8	2	..	13064b
44	2458	23.4	-16 17	9.9	10.5	G	1	..	24583b	94	3955	23.6	-47 7	9.6	8.7	B9	3	..	39930b
45	2459	23.4	-16 46	9.3	9.4	A2	3	..	24583b	95	3553	23.6	-49 10	7.3	7.4	Ao	5	0,3	8952b
46	2413	23.4	-19 22	9.7	10.1	A2	1	..	24583b	96	3343	23.6	-51 4	8.5	8.4	B9	6	..	24598b
47	2415	23.4	-19 52	8.6	9.5	Ko	1	..	18302b	97	1638	23.6	-54 49	9.0	9.1	A2	3	..	24598b
48	5498	23.4	-27 7	8.8	8.7	Ko	2	..	13072b	98	1121	23.6	-58 55	9.0	10.1	G	1	..	40088b
49	4649	23.4	-36 19	9.0	8.3	B3	3	..	13073b	99	965	23.6	-63 46	9.5	10.6	K2	1	..	40095b
50	4345	23.4	-40 4	9.25	9.4	Ko	3	..	24747b	100	697	23.6	-72 49	8.5	8.5	Ao	6	0,5	22237b

THE HENRY DRAPER CATALOGUE.

71700

8<sup>h</sup> 23<sup>m</sup>.6

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	383	23.6	-77 10	4.26	5.26	Ko	..	0,8 R	28,202	51	2499	23.9	-7 13	8.0	8.1	A2	5	..	19136b
2	384	23.6	-78 1	8.3	8.4	A2	3	1,3	20869b	52	2354	23.9	-19 7	9.2	9.5	F	3	..	24583b
3	420	23.7	+73 47	7.44	8.44	Ko	6	5,5	38187i	53	2451	23.9	-22 0	8.8	8.7	A2	4	..	18302b
4	549	23.7	+67 38	7.8	8.8	Ko	4	..	37713i	54	6987	23.9	-24 53	9.4	9.3	K2	1	..	13072b
5	1583	23.7	+47 6	7.34	7.76	F5	6	..	37704i	55	6076	23.9	-26 41	8.1	8.4	F8	6	..	13072b
6	1984	23.7	+7 14	8.8	9.9	K2	3	..	20710b	56	4355	23.9	-39 18	8.9	9.4	B9	3	..	24747b
7	2355	23.7	-4 14	9.2	10.0	G5	1	..	22751b	57	1042	23.9	-59 48	9.5	10.3	G5	1	..	40088b
8	2541	23.7	-5 24	9.0	9.6	Go	2	..	19136b	58	1020	23.9	-62 34	8.7	9.8	K2	3	..	40095b
9	2542	23.7	-5 37	10.2	10.2	Ao	2	..	19136b	59	848	23.9	-66 19	10.4	10.4	Ao	2	..	21452b
10	2496	23.7	-7 52	8.6	9.1	F8	4	..	19136b	60	847	23.9	-66 28	9.4	10.4	Ko	2	..	21452b
11	2539	23.7	-11 3	8.8	9.8	Ko	3	..	19015b	61	1740	24.0	+49 40	8.1	8.5	F5	3	..	38188i
12	2547	23.7	-12 24	9.0	9.1	A2	5	..	19015b	62	1613	24.0	+28 35	8.9	9.3	F5	3	E	38635i
13	2552	23.7	-13 14	8.0	8.3	F2	7	..	19015b	63	1941	24.0	+22 21	9.1	10.5	Ma	1	0,2	10654m
14	2509	23.7	-17 13	8.7	9.7	Ko	4	..	24583b	64	1852	24.0	+12 42	9.5	10.3	G5	2	..	37628i
15	5321	23.7	-32 56	8.9	8.7	Ao	1	..	12788b	65	2310	24.0	+0 3	7.33	7.33	Ao	6	..	37654i
16	4832	23.7	-34 42	8.6	8.9	Ao	2	..	12788b	66	2532	24.0	-9 25	5.98	6.32	F2	10	..	19136b
17	4654	23.7	-36 21	8.6	8.6	Ao	3	..	13054b	67	2465	24.0	-16 54	9.3	9.9	Go	4	..	24583b
18	4300	23.7	-43 54	8.2	9.0	K5	3	..	13064b	68	2464	24.0	-17 4	8.7	9.0	F2	5	..	24583b
19	4421	23.7	-44 16	10.5	9.6	Ao	4	..	24747b	69	2355	24.0	-18 49	9.9	9.9	Ao	2	..	24583b
20	4175	23.7	-46 29	9.6	9.3	F8	2	..	39930b	70	2417	24.0	-19 27	9.3	9.5	G5	1	..	18302b
21	3799	23.7	-48 38	7.6	7.4	B9	4	1,2	8952b	71	5512	24.0	-27 14	7.5	7.4	B5	5	..	43040b
22	1474	23.7	-52 29	6.14	6.9	Ao	..	0,4	56,125	72	4357	24.0	-39 35	9.7	9.1	B9	2	..	13064b
23	1677	23.7	-53 16	9.5	9.5	Ao	4	..	24598b	73	4425	24.0	-44 47	9.1	8.7	Ao	3	0,5	13064b
24	1678	23.7	-53 36	8.9	9.7	G5	1	..	24598b	74	3962	24.0	-47 45	10.5	9.3	Ao	1	..	39930b
25	1639	23.7	-54 44	9.1	8.9	A	4	..	24598b	75	3023	24.0	-51 10	8.4	8.3	Ao	8	..	24598b
26	1117	23.7	-61 1	7.9	8.3	A3	6	..	40088b	76	1681	24.0	-53 42	9.7	9.7	Ao	2	..	24598b
27	929	23.7	-65 15	9.6	10.6	Ko	1	..	21452b	77	1520	24.0	-57 35	8.3	8.8	F8	3	..	40088b
28	2109	23.8	+39 43	8.12	8.90	G5	3	..	37390i	78	1124	24.0	-58 26	10.1	10.1	A	1	..	40088b
29	1789	23.8	+26 31	6.67	6.67	Ao	6	..	38218i	79	1238	24.1	+53 53	8.6	9.2	Go	3	..	38188i
30	1934	23.8	+24 41	7.01	8.01	Ko	6	..	38635i	80	1853	24.1	+12 47	8.8	9.6	G5	2	..	37628i
31	1935	23.8	+23 56	9.6	10.4	G5	1	..	38635i	81	1985	24.1	+9 46	8.17	8.23	A2	3	..	37628i
32	2362	23.8	-3 55	9.0	9.0	Ao	4	..	22751b	82	2544	24.1	-5 33	7.38	8.38	Ko	7	..	19136b
33	2535	23.8	-14 35	9.7	10.8	K2	2	..	24583b	83	2557	24.1	-14 3	9.3	9.6	Fo	2	..	19015b
34	2536	23.8	-14 39	8.7	8.7	Ao	6	..	19015b	84	2451	24.1	-15 38	9.7	9.7	Ao	3	..	24583b
35	2461	23.8	-16 24	9.0	10.0	Ko	1	E	20857b	85	2418	24.1	-19 27	9.5	10.0	G5	2	..	24583b
36	..	23.8	-16 29	..	..	F8	2	..	24583b	86	4149	24.1	-41 49	10.3	9.4	B9	1	..	13064b
37	2463	23.8	-17 5	9.2	9.8	Go	4	..	24583b	87	4428	24.1	-44 18	8.6	8.1	Ao	5	0,3	13064b
38	2449	23.8	-21 35	9.2	8.9	Ao	2	..	18302b	88	3963	24.1	-47 28	8.5	7.8	B9	4	..	39930b
39	6982	23.8	-24 8	9.4	8.9	Ao	2	..	13072b	89	3559	24.1	-49 44	9.2	9.0	Ao	3	..	39930b
40	5324	23.8	-33 3	7.8	8.9	Ko	2	..	12788b	90	3350	24.1	-50 48	7.4	7.7	A3	3	1,2	8952b
41	4266	23.8	-40 14	9.55	9.7	G5	2	..	24747b	91	1521	24.1	-57 57	9.3	9.4	A3	2	..	40088b
42	4145	23.8	-41 24	8.3	8.8	A3	4	1,3	13064b	92	967	24.1	-63 48	10.3	10.4	A3	2	..	40095b
43	4178	23.8	-46 11	10.0	9.1	B9	3	..	39930b	93	..	24.1	-76 2	var.	var.	Md	1	R	22237b
44	3959	23.8	-47 54	8.9	8.7	B9	3	..	39930b	94	1738	24.2	+15 51	8.2	8.3	A2	6	..	38960i
45	3801	23.8	-48 28	10.0	9.2	Ao	2	..	39930b	95	2064	24.2	+8 45	6.75	7.75	Ko	5	..	37628i
46	1680	23.8	-53 40	9.7	9.7	Ao	2	..	24598b	96	2545	24.2	-5 18	8.40	9.40	Ko	3	..	19136b
47	330	23.8	-79 3	9.8	9.9	A5	4	..	22237b	97	2537	24.2	-14 53	10.2	11.2	Ko	1	..	24583b
48	1258	23.9	+53 27	8.6	9.4	G5	3	..	38188i	98	2512	24.2	-17 12	8.0	8.4	F5	8	..	24583b
49	1848	23.9	+21 7	9.9	10.7	G5	1	..	10654m	99	2357	24.2	-19 3	10.2	10.3	A3	1	..	24583b
50	1927	23.9	+13 27	8.6	9.4	G5	3	..	37628i	100	6086	24.2	-29 0	9.4	8.9	Ao	2	..	13072b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

71800

8<sup>h</sup> 24<sup>m</sup>.2

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	4842	24.2	m. ° ' 34 47	5.82	5.70	B5	..	3,7	56,125	51	2456	24.5	m. ° ' 15 27	8.6	8.6	Ao	6	..	19015b
2	4184	24.2	° ' 46 31	9.8	9.6	K2	1	..	39930b	52	2420	24.5	° ' 19 55	9.0	9.2	B9	2	..	18302b
3	3026	24.2	° ' 51 9	7.8	8.0	Fo	9	..	24598b	53	2550	24.5	° ' 20 18	9.33	9.5	A2	3	..	18302b
4	3028	24.2	° ' 51 13	9.1	8.7	B9	6	..	24598b	54	7360	24.5	° ' 23 57	9.8	9.2	A5	1	..	13072b
5	1480	24.2	° ' 52 22	6.8	6.9	F2	..	0,5-	56,125	55	5062	24.5	° ' 33 17	9.0	9.2	B9	1	..	12788b
6	1683	24.2	° ' 53 54	8.9	9.7	G5	3	..	24598b	56	4848	24.5	° ' 34 50	7.71	8.3	K2	3	..	13073b
7	1643	24.2	° ' 55 2	7.36	7.3	B9	9	..	24598b	57	4277	24.5	° ' 40 55	7.3	8.3	Ao	6	1,7	13073b
8	1643	24.2	° ' 56 59	8.6	8.3	B9	5	..	40088b	58	4162	24.5	° ' 41 21	9.5	9.1	Ao	2	..	13064b
9	1986	24.3	+ 4 47	8.91	9.69	G5	2	..	37654i	59	3816	24.5	° ' 48 27	9.6	9.0	B9	3	..	39930b
10	1988	24.3	+ 3 24	8.9	9.7	G5	2	..	37654i	60	3566	24.5	° ' 49 12	9.2	9.3	Ao	2	..	39930b
11	2454	24.3	° ' 15 32	8.8	9.8	Ko	3	..	19015b	61	3569	24.5	° ' 50 0	9.48	9.0	Ao	3	..	39930b
12	2514	24.3	° ' 17 32	10.2	10.8	G	1	..	24583b	62	3030	24.5	° ' 51 34	9.2	9.2	G5	4	..	24598b
13	2515	24.3	° ' 17 38	8.6	8.7	A3	7	..	24583b	63	878	24.5	° ' 64 16	6.02	7.5	G5	10	..	8913b
14	2287	24.3	° ' 22 20	8.6	8.6	Ao	4	..	18302b	64	910	24.5	° ' 69 50	8.5	9.5	Ko	1	..	19155b
15	2286	24.3	° ' 22 44	6.35	6.0	Ao	8	0,9	43040b	65	911	24.5	° ' 70 3	8.5	9.7	K5	1	..	19155b
16	6085	24.3	° ' 26 33	9.6	8.9	Ao	3	..	13072b	66	2066	24.6	+ 40 33	6.66	6.66	Aop	8	0,8R	37390i
17	5516	24.3	° ' 28 2	9.0	8.7	Ao	2	..	13072b	67	1916	24.6	+ 38 37	7.52	8.70	K5	3	..	37390i
18	6090	24.3	° ' 28 23	9.4	8.6	A5	3	..	13072b	68	1942	24.6	+ 22 23	9.6	10.8	K5	1	..	10654m
19	4275	24.3	° ' 40 31	10.6	9.7	A2	3	..	24747b	69	1990	24.6	+ 3 30	8.9	9.3	F5	1	..	37654i
20	4304	24.3	° ' 43 22	10.9	10.3	B	2	R	24747b	70	2056	24.6	° ' 2 3	9.5	9.6	A5	1	..	22751b
21	4305	24.3	° ' 43 23	10.9	10.3	B	2	R	24747b	71	2368	24.6	° ' 3 33	8.6	8.7	A2	3	..	22751b
22	4148	24.3	° ' 45 13	8.90	9.6	K5	1	..	39930b	72	4504	24.6	° ' 38 39	8.4	8.3	A3	3	..	13064b
23	3967	24.3	° ' 47 24	8.9	8.4	B5	3	..	39930b	73	4309	24.6	° ' 43 43	10.5	9.8	B9	3	..	24747b
24	3966	24.3	° ' 47 35	9.6	9.6	G5	1	..	39930b	74	3973	24.6	° ' 47 21	8.5	8.2	B9	5	..	39930b
25	3561	24.3	° ' 49 31	9.4	9.2	A2	2	..	39930b	75	3567	24.6	° ' 49 25	9.4	9.0	B9	2	..	39930b
26	1044	24.3	° ' 59 7	8.5	9.0	F5	5	3,2	40088b	76	1128	24.6	° ' 58 54	9.4	9.8	F5	2	..	40088b
27	337	24.4	+ 77 21	7.40	7.90	F8	7	..	37714i	77	1129	24.6	° ' 59 1	9.1	10.1	Ko	1	..	40088b
28	423	24.4	+ 72 21	7.8	7.9	A3	4	..	38187i	78	933	24.6	° ' 65 48	3.65	4.65	Ko	..	2,3R	28,202
29	1430	24.4	+ 51 2	7.8	8.6	G5	2	..	38188i	79	935	24.6	° ' 67 34	10.3	10.4	A2	3	R	21452b
30	2000	24.4	° ' 0 38	6.92	7.92	Ko	5	..	37654i	80	518	24.7	+ 70 18	8.9	9.0	A5	2	..	38602i
31	2381	24.4	° ' 8 41	8.6	8.6	Ao	5	..	19136b	81	1431	24.7	+ 50 57	7.40	7.96	Go	6	..	38188i
32	2455	24.4	° ' 15 12	8.61	9.03	F5	5	..	19015b	82	1832	24.7	+ 35 43	7.9	8.9	Ko	2	..	38611i
33	2549	24.4	° ' 20 37	6.47	6.4	B8	8	3,9	9441b	83	2067	24.7	+ 8 44	9.1	9.1	B9	2	..	37628i
34	7355	24.4	° ' 23 30	7.8	7.4	A2	7	..	18302b	84	2312	24.7	+ 0 35	7.56	8.56	Ko	4	..	37654i
35	4664	24.4	° ' 36 24	8.6	8.1	G5	3	..	13054b	85	2001	24.7	° ' 0 26	8.8	8.9	A2	1	..	37654i
36	4736	24.4	° ' 37 24	8.6	8.3	Ao	4	..	13054b	86	2589	24.7	° ' 2 49	9.0	9.8	G5	1	..	22751b
37	4367	24.4	° ' 39 47	9.2	8.8	B9	3	..	13064b	87	2550	24.7	° ' 5 59	var.	var.	Mc	4	R	19136b
38	4307	24.4	° ' 43 27	10.5	9.9	Ao	2	..	24747b	88	2552	24.7	° ' 12 31	8.1	9.3	K5	4	..	19015b
39	3813	24.4	° ' 48 19	10.0	9.2	Ao	3	..	39930b	89	2551	24.7	° ' 12 34	8.4	9.6	K5	2	..	19015b
40	3812	24.4	° ' 48 29	11.5	10.0	Ao	1	..	39930b	90	2472	24.7	° ' 16 48	9.7	10.0	Fo	2	..	24583b
41	1645	24.4	° ' 55 0	7.66	7.3	Ao	10	..	24598b	91	2516	24.7	° ' 17 28	9.5	9.5	Ao	3	..	24583b
42	1525	24.4	° ' 57 31	8.8	9.4	Go	2	..	40088b	92	2422	24.7	° ' 19 17	9.7	9.8	G5	2	..	24583b
43	876	24.4	° ' 64 7	8.9	9.9	Ko	4	..	21452b	93	6136	24.7	° ' 25 14	8.60	8.3	B9	4	..	13072b
44	2065	24.5	+ 40 23	6.95	7.01	A3	7	1,6	37390i	94	5068	24.7	° ' 33 31	7.9	8.4	A2	3	..	12788b
45	1831	24.5	+ 36 15	8.6	8.6	Ao	1	..	37390i	95	4370	24.7	° ' 39 47	9.9	9.4	Ao	1	..	13064b
46	1852	24.5	+ 21 30	10.1	11.5	Ma	1	..	8253m	96	4166	24.7	° ' 41 30	8.9	9.1	B9	3	..	13064b
47	1853	24.5	+ 21 11	9.2	10.0	G5	2	0,1	10654m	97	4278	24.7	° ' 42 31	9.4	9.4	Go	1	..	13064b
48	1811	24.5	+ 10 48	8.4	9.0	Go	4	..	37628i	98	3356	24.7	° ' 50 13	8.6	9.0	B9	3	..	39930b
49	1987	24.5	+ 4 41	8.65	9.07	F5	2	..	37654i	99	3031	24.7	° ' 51 16	8.2	8.3	B9	9	..	24598b
50	2547	24.5	° ' 5 41	8.8	8.8	B9	5	..	19136b	100	1686	24.7	° ' 53 43	8.5	8.0	Ao	7	..	24598b



## THE HENRY DRAPER CATALOGUE.

71900

8<sup>h</sup> 24<sup>m</sup>.7

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1555	24.7	-55 56	8.6	8.9	Fo	4	..	40088b	51	550	25.1	+67 32	9.0	10.4	Mb	..	..	M
2	1130	24.7	-58 16	9.5	9.8	Fo	2	..	40088b	52	1259	25.1	+53 26	6.53	7.53	Ko	7	..	38188i
3	1121	24.7	-61 5	9.0	9.9	Ko	1	..	40088b	53	1855	25.1	+20 58	9.6	10.2	Go	2	..	10654m
4	849	24.7	-66 54	9.9	10.4	F8	3	..	21452b	54	1991	25.1	+4 25	8.3	8.3	Ao	3	..	37654i
5	1150	24.8	+57 3	8.2	9.0	G5	2	E	37676i	55	1992	25.2	+3 10	8.4	9.5	K2	2	..	37654i
6	1870	24.8	+37 36	6.06	6.04	B9	9	..	37390i	56	2539	25.1	-10 8	7.46	8.46	Ko	7	..	19136b
7	2021	24.8	+19 16	8.4	9.5	K2	2	..	10654m	57	2543	25.1	-15 7	9.7	9.8	A2	3	..	24583b
8	1983	24.8	+5 34	8.4	8.5	A5	2	..	37654i	58	2459	25.1	-15 23	9.9	11.1	K5	1	..	24583b
9	2002	24.8	-0 11	8.98	8.98	Ao	3	..	22751b	59	2476	25.1	-16 19	9.9	10.0	A2	1	..	24583b
10	2540	24.8	-14 18	9.9	10.2	F2	2	..	24583b	60	2365	25.1	-18 23	10.6	11.4	G5	1	..	24583b
11	2553	24.8	-20 43	9.2	8.9	F5	3	..	18302b	61	2557	25.1	-20 57	8.0	8.6	Ao	5	..	18302b
12	6224	24.8	-29 37	7.8	8.3	Ao	4	3,3	12788b	62	2295	25.1	-22 41	9.9	9.2	A	1	..	18302b
13	4858	24.8	-34 24	7.9	8.0	B5	5	..	12788b	63	6147	25.1	-25 19	10.1	9.0	A2	2	..	13072b
14	4510	24.8	-38 25	9.9	8.9	B9	3	..	24747b	64	5073	25.1	-33 8	8.3	8.9	Ao	1	..	12788b
15	4169	24.8	-41 54	7.3	9.1	K2	3	..	13064b	65	4381	25.1	-39 43	9.3	9.4	Ao	2	..	13064b
16	4313	24.8	-43 53	9.1	9.0	K2	2	..	13064b	66	4380	25.1	-39 57	8.85	9.4	Go	3	R	24747b
17	4198	24.8	-46 29	10.0	9.3	A2	3	..	39930b	67	4285	25.1	-40 50	7.5	7.9	Ao	7	1,7	13073b
18	3570	24.8	-49 16	8.9	8.6	Ao	3	..	13038b	68	4160	25.1	-45 20	10.0	10.1	K2	1	..	39930b
19	1647	24.8	-54 41	6.42	6.9	Ao	6	..	4985b	69	3360	25.1	-50 54	8.0	7.4	B9	5	..	39930b
20	1652	24.8	-56 28	9.0	10.0	K5	1	..	40088b	70	1022	25.1	-62 7	9.1	10.1	Ko	2	..	40095b
21	1122	24.8	-60 19	8.5	9.3	F5	4	..	40088b	71	913	25.1	-69 31	8.3	8.3	Ao	3	..	24527b
22	500	24.8	-73 50	7.6	7.7	A3	6	..	24527b	72	514	25.1	-76 6	7.5	7.6	A2	4	..	24452b
23	1792	24.9	+26 21	8.7	9.9	K5	1	..	38635i	73	342	25.2	+75 4	6.28	6.42	A5	9	0,10	38187i
24	1967	24.9	+23 49	9.5	10.3	G5	2	..	38635i	74	1834	25.2	+35 19	7.32	8.10	G5	3	..	37390i
25	1986	24.9	+2 9	8.8	8.8	A	2	..	37654i	75	1793	25.2	+26 30	8.5	8.9	F5	3	..	38635i
26	2313	24.9	+0 21	7.18	7.74	Go	7	..	37654i	76	2519	25.2	-17 17	9.9	10.4	F8	2	..	24583b
27	2518	24.9	-17 25	8.8	9.8	Ko	3	..	24583b	77	2520	25.2	-17 57	9.2	10.2	Ko	1	..	24583b
28	6102	24.9	-28 22	8.4	7.4	B5	7	..	13072b	78	2424	25.2	-19 47	8.6	9.2	Ko	1	..	18302b
29	6227	24.9	-29 23	9.0	9.5	K2	1	..	13072b	79	6099	25.2	-26 36	8.8	9.0	Ko	2	..	13072b
30	6335	24.9	-30 31	7.6	8.0	Ao	3	..	12788b	80	6236	25.2	-30 2	8.34	8.6	A2	3	..	12788b
31	4672	24.9	-36 13	8.6	8.3	A2	5	..	13054b	81	4871	25.2	-34 35	9.3	9.2	Ao	2	0,2	13046b
32	4515	24.9	-38 46	8.6	8.5	F5	3	..	13064b	82	4382	25.2	-39 37	10.3	9.7	A	1	..	13064b
33	4446	24.9	-44 12	10.0	9.6	G5	4	..	24747b	83	4385	25.2	-39 58	9.9	9.7	Ao	2	..	24747b
34	3572	24.9	-49 46	8.2	7.6	B8	3	3,5	8952b	84	4205	25.2	-46 37	8.4	8.1	B9	4	..	13038b
35	1484	24.9	-52 46	5.12	5.8	Fo	..	5,8R	56,125	85	515	25.2	-76 7	9.3	9.3	A	2	..	24452b
36	1046	24.9	-59 13	9.0	9.0	B9	4	1,1	40088b	86	128	25.3	+85 24	7.41	7.75	F2	7	..	37546i
37	2116	25.0	+39 27	8.7	9.7	Ko	1	..	37390i	87	1794	25.3	+26 5	7.44	7.50	A2	4	..	38218i
38	2372	25.0	-4 5	9.3	10.1	G5	1	..	22751b	88	2024	25.3	+19 17	7.38	7.46	A3	6	..	37617i
39	2364	25.0	-4 41	9.9	9.9	Ao	2	..	22751b	89	1974	25.3	+6 45	8.4	9.2	G5	3	E	37654i
40	2502	25.0	-7 23	9.3	9.3	Ao	1	..	19136b	90	1991	25.3	+2 26	8.8	9.1	Fo	2	..	37654i
41	2385	25.0	-8 21	9.0	10.2	K5	1	..	19136b	91	2058	25.3	-2 2	7.92	7.90	B9	7	..	22751b
42	2542	25.0	-14 11	9.3	10.3	Ko	1	..	19015b	92	2554	25.3	-12 26	9.3	9.4	A2	4	..	19015b
43	2458	25.0	-15 40	9.1	9.1	Ao	3	..	19015b	93	2462	25.3	-15 27	9.7	10.2	F8	4	..	24583b
44	2474	25.0	-16 28	8.4	9.4	Ko	3	..	24583b	94	2477	25.3	-16 48	9.2	9.2	Ao	5	..	24583b
45	2364	25.0	-18 25	7.66	7.61	B8	8	..	24583b	95	2297	25.3	-22 44	9.3	8.7	Ao	2	..	18302b
46	5534	25.0	-27 27	9.6	8.6	B9	3	R	13072b	96	6151	25.3	-25 34	8.2	8.3	A3	4	..	13072b
47	6106	25.0	-28 20	8.1	8.4	Ko	6	..	13072b	97	6103	25.3	-27 0	6.50	7.0	B9	7	..	43040b
48	4666	25.0	-35 39	9.7	9.5	Ao	2	..	13073b	98	4175	25.3	-41 12	8.6	8.5	B9	5	0,3	13064b
49	3980	25.0	-47 21	9.0	8.4	A2	4	..	39930b	99	4165	25.3	-45 13	8.84	9.0	Fo	2	..	39930b
50	3036	25.0	-51 25	10.5	10.0	K2	2	..	24598b	100	4208	25.3	-46 32	10.9	10.2	G5	1	..	39930b



## ANNALS OF HARVARD COLLEGE OBSERVATORY.

72000

8<sup>h</sup> 25<sup>m</sup>.3

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	4209	25.3	-46 37	11.5	9.6	A2	1	..	39930b	51	1706	25.7	+33 30	9.1	10.1	K	1	..	38634i
2	939	25.3	-65 54	9.9	9.9	A0	3	..	21452b	52	1719	25.7	+30 3	8.2	8.5	F2	4	..	38218i
3	1284	25.4	+55 41	7.68	8.68	K0	3	..	38188i	53	1993	25.7	+9 32	8.2	8.6	F5	4	..	37628i
4	1832	25.4	+36 43	8.5	8.8	F2	1	..	37390i	54	2005	25.7	-0 28	8.8	8.9	A3	2	..	22751b
5	1957	25.4	+18 41	8.6	9.2	G0	4	..	10654m	55	2620	25.7	-6 49	7.8	7.8	B8	7	..	19136b
6	1931	25.4	+13 21	9.1	9.9	G5	2	..	37628i	56	2542	25.7	-9 57	8.0	9.0	K0	4	..	19136b
7	1994	25.4	+3 1	9.1	9.2	A3	2	..	37654i	57	2549	25.7	-10 55	8.8	10.0	K5	1	..	19015b
8	2505	25.4	-7 25	9.0	9.3	F0	4	..	19136b	58	2370	25.7	-11 31	9.2	10.4	K5	1	..	19015b
9	2555	25.4	-13 1	9.7	9.8	A5	1	..	19015b	59	2558	25.7	-12 18	8.2	8.3	A2	8	..	19015b
10	2463	25.4	-15 13	9.7	10.7	K0	2	..	24583b	60	2557	25.7	-13 8	7.16	7.22	A2	3	2,9	8827b
11	2478	25.4	-16 23	8.2	9.2	K0	3	..	24583b	61	2427	25.7	-19 44	9.3	10.1	Mb	1	..	24583b
12	2425	25.4	-19 24	9.5	9.8	A2	4	..	24583b	62	2562	25.7	-20 33	8.2	9.2	Ma	3	..	18302b
13	5079	25.4	-33 33	9.3	8.9	B9	1	..	13046b	63	4887	25.7	-34 36	8.7	9.5	B8	1	..	13073b
14	4290	25.4	-42 15	6.65	6.4	B3	4	..	8888b	64	4296	25.7	-40 28	9.9	9.7	A5	2	..	24747b
15	4289	25.4	-42 52	9.6	9.2	G0	2	..	13064b	65	4297	25.7	-40 49	9.9	9.1	A0	3	..	13064b
16	4328	25.4	-43 13	10.5	10.1	A0	2	..	24747b	66	4336	25.7	-43 35	6.70	8.2	K5	7	..	13064b
17	3990	25.4	-47 7	8.8	8.7	G5	2	..	39930b	67	4337	25.7	-43 50	5.94	5.7	B3	..	0,6	56,125
18	3581	25.4	-49 53	9.8	9.3	B9	2	..	39930b	68	4213	25.7	-46 27	9.8	9.9	K5	1	..	39930b
19	3041	25.4	-51 26	7.6	7.4	B9	5	0,7	4985b	69	3045	25.7	-51 13	8.8	8.7	F2	7	0,3	24598b
20	1490	25.4	-52 26	8.8	9.3	K0	1	..	40275b	70	1532	25.7	-57 25	8.8	8.9	F0	3	..	40088b
21	1133	25.4	-58 56	9.0	9.5	F8	2	..	40088b	71	942	25.7	-65 40	9.9	10.4	F8	2	..	19155b
22	1433	25.5	+51 6	8.9	9.2	F2	2	..	38188i	72	774	25.7	-70 43	7.4	8.5	K2	4	..	24527b
23	1937	25.5	+25 19	9.1	10.3	K5	1	..	38635i	73	1597	25.8	+45 19	8.0	8.6	G0	3	..	37704i
24	2618	25.5	-6 23	9.3	10.3	K0	1	..	19136b	74	1858	25.8	+12 11	8.4	9.0	G0	3	..	37628i
25	2617	25.5	-6 42	7.50	7.50	A0	8	..	19136b	75	1859	25.8	+11 58	7.8	8.8	K0	4	..	37628i
26	2545	25.5	-14 34	9.5	9.6	A2	2	..	19015b	76	2543	25.8	-9 52	7.71	7.99	F0	8	..	19136b
27	2544	25.5	-14 52	9.9	10.9	K0	2	..	24583b	77	2559	25.8	-13 1	9.3	9.4	A5	2	..	19015b
28	2546	25.5	-14 59	9.9	9.9	A0	3	..	24583b	78	2550	25.8	-14 50	9.7	10.7	K0	3	..	24583b
29	2522	25.5	-18 1	8.0	9.0	K0	7	..	24583b	79	2548	25.8	-15 2	8.31	8.31	A0	8	..	19015b
30	7386	25.5	-23 12	8.2	7.7	A3	5	..	18302b	80	2482	25.8	-16 12	9.9	10.4	F8	2	..	24583b
31	7018	25.5	-24 35	8.6	9.2	K0	2	..	13072b	81	..	25.8	-18 52	..	..	A3	2	..	24583b
32	6158	25.5	-25 20	10.5	9.2	A0	1	..	13072b	82	2370	25.8	-19 6	9.0	9.2	A3	3	..	18302b
33	6155	25.5	-25 58	8.8	8.4	A0	3	..	13072b	83	7027	25.8	-24 33	9.4	9.3	K0	1	..	13072b
34	4167	25.5	-45 24	9.8	9.0	B9	3	..	39930b	84	6130	25.8	-28 19	9.4	8.3	A2	3	..	13072b
35	1123	25.5	-60 39	8.6	10.1	K2	2	..	40088b	85	6249	25.8	-30 0	8.04	9.2	K5	1	..	12788b
36	506	25.5	-74 16	8.8	9.9	K2	1	..	22237b	86	5087	25.8	-33 44	7.8	7.8	A0	4	..	12788b
37	638	25.6	+65 29	5.39	5.39	A0	8	0, R	38603i	87	4528	25.8	-38 17	9.9	9.1	A0	2	..	13064b
38	691	25.6	+63 57	8.4	9.4	K0	1	..	38603i	88	4459	25.8	-44 33	10.5	8.8	B9	3	..	13064b
39	1434	25.6	+50 59	8.7	9.8	K2	1	..	38188i	89	4173	25.8	-45 13	7.74	7.5	B9	5	..	13038b
40	1705	25.6	+33 30	9.1	9.2	A2	3	..	38634i	90	4000	25.8	-47 51	8.0	7.5	A0	2	2,5	8952b
41	1940	25.6	+24 25	5.73	6.01	F0	9	R	38635i	91	1495	25.8	-52 8	9.0	9.3	A	1	..	40275b
42	2508	25.6	-7 40	8.7	8.8	A5	4	..	19136b	92	1151	25.9	+56 53	8.8	9.4	G	3	E	37705i
43	2546	25.6	-10 17	8.81	8.76	B8	5	..	19136b	93	2026	25.9	+19 47	8.05	8.55	F8	3	..	37617i
44	2556	25.6	-12 42	9.7	9.8	A2	1	..	19015b	94	1963	25.9	+18 26	5.57	6.92	Ma	8	R	37617i
45	2480	25.6	-16 30	8.0	8.3	F0	7	..	24583b	95	1864	25.9	+17 40	7.8	8.9	K2	2	..	37617i
46	2479	25.6	-17 4	9.3	9.6	F2	2	..	24583b	96	1988	25.9	+7 21	8.6	9.8	K5	2	..	20710b
47	5084	25.6	-33 56	7.7	8.9	K0	2	..	12788b	97	2111	25.9	+1 41	7.8	8.1	F0	6	..	37654i
48	4881	25.6	-34 22	7.7	8.3	A0	3	..	12788b	98	2545	25.9	-9 31	8.0	8.4	F5	6	..	19136b
49	4335	25.6	-43 55	8.4	8.5	F8	7	..	24747b	99	2371	25.9	-11 49	9.5	9.6	A2	3	..	19015b
50	936	25.6	-67 32	9.2	10.4	K5	2	..	21452b	100	2560	25.9	-12 36	9.3	9.8	F8	2	..	19015b

## THE HENRY DRAPER CATALOGUE.

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8<sup>h</sup> 25<sup>m</sup>.9

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	2525	25.9	-18 0	9.3	10.3	Ko	1	..	24583b	51	2527	26.2	-17 43	9.0	9.3	Fo	5	..	24583b
2	2371	25.9	-18 19	9.7	10.7	Ko	1	..	24583b	52	2528	26.2	-17 46	9.0	9.8	G5	3	..	24583b
3	2372	25.9	-18 55	9.3	9.4	A3	2	..	24583b	53	2373	26.2	-19 2	8.8	8.8	Ao	5	..	18302b
4	2429	25.9	-19 57	8.4	9.2	K5	2	..	18302b	54	2430	26.2	-19 34	10.2	10.3	A	1	..	24583b
5	2565	25.9	-20 41	10.4	9.5	A	1	..	18302b	55	2568	26.2	-20 51	8.7	9.2	A2	3	..	18302b
6	4533	25.9	-38 17	7.9	8.2	Ao	5	..	13064b	56	7034	26.2	-24 59	9.0	9.2	Ko	1	..	13072b
7	4338	25.9	-43 8	10.0	9.4	B8	3	..	24747b	57	6143	26.2	-28 19	9.3	8.6	A2	4	..	13072b
8	4004	25.9	-47 36	5.52	5.7	B5	..	2,7 R	28,202	58	5372	26.2	-32 44	7.7	8.9	K2	2	..	12788b
9	4003	25.9	-47 42	8.9	8.4	Ao	2	..	13038b	59	4193	26.2	-41 27	9.0	9.1	B9	4	..	13064b
10	3585	25.9	-49 11	9.4	9.6	Go	2	..	3993ob	60	4306	26.2	-42 10	9.0	8.6	F8	6	2,4	24747b
11	1563	25.9	-55 43	8.2	8.2	B9	6	..	40088b	61	4305	26.2	-43 0	8.2	7.9	B9	8	..	13064b
12	944	25.9	-65 41	9.8	10.2	F5	2	..	21452b	62	4177	26.2	-45 13	9.84	9.6	Ao	2	..	3993ob
13	1176	26.0	+58 55	6.77	6.77	Ao	6	0,8	37676i	63	3593	26.2	-49 55	9.1	9.2	B9	3	..	3993ob
14	1751	26.0	+32 30	7.60	7.94	F2	5	..	38218i	64	1497	26.2	-52 38	8.9	9.6	K2	1	..	40275b
15	2027	26.0	+19 19	6.74	7.74	Ko	5	..	37617i	65	1028	26.2	-61 14	8.9	10.6	K2	1	..	40088b
16	1837	26.0	+15 46	8.8	8.8	Ao	2	..	38960i	66	890	26.2	-64 26	9.4	10.4	Ko	3	..	21452b
17	1935	26.0	+13 5	8.8	9.1	Fo	3	..	37628i	67	560	26.3	+66 36	8.6	8.6	A	3	..	38602i
18	2372	26.0	-11 28	7.6	8.6	Ko	6	..	19015b	68	1177	26.3	+59 9	9.0	9.1	A2	2	..	37676i
19	2551	26.0	-14 38	9.9	10.9	Ko	3	..	24583b	69	1838	26.3	+34 54	8.89	9.89	Ko	1	..	38634i
20	2567	26.0	-20 33	8.6	8.7	A2	4	..	18302b	70	1752	26.3	+32 47	8.7	9.3	Go	2	..	38634i
21	7029	26.0	-24 5	9.0	8.6	Ao	3	..	13072b	71	2115	26.3	+1 15	8.4	9.8	Ma	..	..	M
22	6120	26.0	-26 44	8.4	8.6	Fo	5	..	13072b	72	2595	26.3	-2 11	8.6	9.1	F8	3	..	22751b
23	4771	26.0	-37 12	9.3	9.2	A	2	..	13073b	73	2472	26.3	-15 30	6.88	7.95	K2	7	..	24583b
24	4398	26.0	-39 54	9.5	9.7	A2	3	..	24747b	74	2484	26.3	-17 8	8.6	9.6	Ko	5	..	24583b
25	4342	26.0	-43 18	8.8	9.0	Ko	1	..	13064b	75	6371	26.3	-30 11	9.20	8.9	B9	2	..	13046b
26	4341	26.0	-43 31	9.8	9.0	B5	6	..	24747b	76	4699	26.3	-36 28	10.3	9.2	Ao	1	..	13073b
27	4462	26.0	-44 23	6.66	5.06	B5	..	2,7 R	56,125	77	4194	26.3	-41 35	8.4	9.4	B9	2	R	13064b
28	4176	26.0	-45 8	9.20	9.0	Ao	4	..	3993ob	78	4194	26.3	-41 35	8.4	9.4	B9	2	..	13064b
29	277	26.1	+79 25	8.4	9.5	K2	1	..	37493i	79	4343	26.3	-43 46	8.6	7.8	B8	5	..	13064b
30	521	26.1	+69 55	8.24	9.02	G5	2	..	38602i	80	4012	26.3	-47 28	9.8	9.0	Ao	3	..	3993ob
31	1742	26.1	+49 36	8.4	8.5	A2	5	..	38188i	81	1662	26.3	-56 42	9.0	9.5	F8	2	..	40088b
32	1886	26.1	+42 28	7.7	8.5	G5	3	..	37704i	82	1534	26.3	-57 29	8.3	8.5	A5	5	5,2	40088b
33	1949	26.1	+22 1	8.7	9.7	Ko	3	..	10654m	83	1152	26.4	+57 16	7.8	7.8	Ao	6	2,4	37705i
34	2470	26.1	-15 39	9.2	9.5	Fo	2	..	24583b	84	1920	26.4	+38 22	6.05	7.05	Ko	8	..	37390i
35	7032	26.1	-24 51	8.1	8.9	K2	2	..	13072b	85	1853	26.4	+34 23	9.1	9.7	Go	1	..	38634i
36	6174	26.1	-25 43	8.2	8.2	Go	6	..	13072b	86	1942	26.4	+24 29	8.9	8.9	Ao	3	..	38635i
37	5099	26.1	-33 51	7.9	9.0	Ko	2	..	13046b	87	2116	26.4	+1 29	7.9	8.9	Ko	4	..	37654i
38	4690	26.1	-35 12	8.55	8.3	B9	4	..	13073b	88	2562	26.4	-5 39	9.7	10.0	F2	1	..	19136b
39	4189	26.1	-41 11	7.9	8.2	B9	6	0,4	13064b	89	2623	26.4	-6 19	9.7	10.3	G	1	..	19136b
40	4221	26.1	-46 34	10.2	9.0	B8	3	..	3993ob	90	2301	26.4	-9 7	8.0	8.0	Ao	4	..	19136b
41	3592	26.1	-49 10	9.4	9.3	Ao	3	..	3993ob	91	2566	26.4	-13 41	7.8	7.9	A3	8	..	19015b
42	1661	26.1	-54 10	8.0	7.7	B9	6	..	24598b	92	2552	26.4	-14 51	8.0	8.3	F2	8	..	19015b
43	1568	26.1	-55 38	8.9	9.7	G5	2	..	40088b	93	2473	26.4	-15 17	9.10	9.38	Fo	4	..	24583b
44	68	26.2	+87 15	8.9	9.5	Go	3	..	37793i	94	2374	26.4	-18 44	9.7	10.3	Go	3	..	24583b
45	1437	26.2	+51 21	8.9	9.9	Ko	1	..	38188i	95	5563	26.4	-27 30	7.68	8.5	F2	5	..	13072b
46	1772	26.2	+29 39	7.06	7.84	G5	5	..	38218i	96	5377	26.4	-32 24	8.4	8.6	Ao	2	..	12788b
47	2114	26.2	+0 56	8.44	9.44	Ko	2	5,2	22751b	97	4704	26.4	-37 0	9.3	9.2	A	1	..	13073b
48	2060	26.2	-1 39	8.2	9.2	Ko	2	..	22751b	98	4182	26.4	-45 34	9.0	9.6	K2	1	..	3993ob
49	2562	26.2	-12 19	9.1	9.4	F2	4	..	19015b	99	3840	26.4	-48 32	10.0	9.3	Ao	2	..	3993ob
50	..	26.2	-15 38	..	..	A2	1	..	24583b	100	1500	26.4	-52 56	8.3	9.3	Ko	1	..	40275b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

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8<sup>h</sup> 26<sup>m</sup>.4

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1535	26.4	-58 2	8.0	8.5	Ko	5	2,2	40088b	51	4185	26.6	-45 29	8.9	9.0	Ko	3	..	39930b
2	946	26.4	-65 46	9.6	10.7	K2	1	..	21452b	52	4231	26.6	-46 39	9.8	9.3	Ko	1	..	39930b
3	857	26.4	-67 2	10.0	10.4	F5	2	..	21452b	53	4023	26.6	-47 41	8.2	7.5	B9	6	0,7-	13038b
4	335	26.4	-78 21	9.1	10.2	K2	1	..	22237b	54	3841	26.6	-49 4	9.6	9.3	Go	2	..	39930b
5	561	26.5	+66 44	8.4	8.5	A2	2	..	38602i	55	1129	26.6	-60 52	9.1	9.6	Ao	1	..	40088b
6	1892	26.5	+42 20	8.4	9.0	G	2	..	37704i	56	1936	26.7	+13 7	7.6	8.6	Ko	5	..	37628i
7	1943	26.5	+24 5	8.9	9.5	Go	3	..	38635i	57	2564	26.7	-5 59	9.3	9.7	F5	3	..	19136b
8	1816	26.5	+10 9	6.58	6.58	Ao	8	..	37628i	58	2515	26.7	-8 3	8.2	9.2	Ko	4	..	19136b
9	1979	26.5	+6 38	9.1	9.1	A	2	..	20710b	59	2393	26.7	-9 0	8.8	9.8	Ko	1	..	19136b
10	1997	26.5	+3 3	8.6	9.4	G5	2	..	37654i	60	2552	26.7	-9 12	9.1	10.1	Ko	1	..	19136b
11	2321	26.5	+0 41	8.4	9.8	Ma	1	..	22751b	61	2376	26.7	-12 9	9.5	10.5	Ko	1	..	19015b
12	2322	26.5	+0 10	8.4	9.4	Ko	2	..	22751b	62	2477	26.7	-15 10	9.11	9.61	F8	5	..	24583b
13	2551	26.5	-9 25	9.2	9.5	Fo	2	..	19136b	63	2530	26.7	-18 6	8.8	9.1	Fo	6	..	24583b
14	2550	26.5	-9 35	8.4	9.4	Ko	3	..	19136b	64	2377	26.7	-18 12	9.2	10.2	Ko	5	..	24583b
15	2550	26.5	-10 36	8.1	9.1	Ko	5	..	19015b	65	2379	26.7	-18 27	8.0	9.0	Ko	7	..	24583b
16	2551	26.5	-11 8	9.1	9.7	Go	3	..	19015b	66	6134	26.7	-26 20	8.0	8.5	F5	4	..	13072b
17	2567	26.5	-14 8	9.9	10.0	A2	1	..	19015b	67	6385	26.7	-30 48	7.19	6.8	B9	7	1,7	12788b
18	2474	26.5	-15 13	9.01	10.01	Ko	3	..	24583b	68	4715	26.7	-36 23	6.67	8.9	K2	4	..	13073b
19	2476	26.5	-15 33	9.0	10.0	Ko	3	..	24583b	69	4319	26.7	-40 48	10.6	9.7	Ao	2	..	24747b
20	2475	26.5	-15 40	8.8	10.2	Ma	3	..	24583b	70	4315	26.7	-42 43	10.5	9.4	A2	3	..	24747b
21	2485	26.5	-16 40	9.2	10.6	Mb	2	..	24583b	71	4350	26.7	-43 57	9.6	9.1	B8	5	..	24747b
22	..	26.5	-17 17	..	..	K5	1	..	24583b	72	1501	26.7	-52 43	9.1	9.3	G	1	..	40275b
23	2376	26.5	-18 43	9.5	10.1	Go	3	..	24583b	73	1537	26.7	-57 30	8.9	8.9	Fo	2	..	40088b
24	7041	26.5	-25 0	8.80	8.5	A2	3	..	18302b	74	1538	26.7	-57 49	8.4	8.9	F8	2	..	40088b
25	6185	26.5	-25 6	8.65	8.5	Ao	5	..	13072b	75	1048	26.7	-59 47	var.	var.	G5	6	5,3 R	40088b
26	6148	26.5	-28 14	9.4	9.4	G5	1	..	13072b	76	1130	26.7	-60 50	9.7	10.7	K	1	..	40088b
27	6165	26.5	-31 49	5.63	7.4	K2	..	0,8	56,125	77	977	26.7	-63 18	9.9	10.2	F2	3	..	40095b
28	4412	26.5	-39 28	9.3	9.4	Ao	3	..	24747b	78	917	26.7	-69 25	8.7	9.1	F5	3	R	19155b
29	4347	26.5	-43 58	9.6	9.1	A	5	R	24747b	79	510	26.7	-74 30	8.5	9.0	F8	3	..	22237b
30	4469	26.5	-44 25	9.0	8.4	Ao	4	..	13064b	80	1710	26.8	+33 45	7.58	7.58	Ao	4	..	38218i
31	4470	26.5	-44 51	9.1	9.0	G5	2	..	13064b	81	1997	26.8	+9 13	8.4	9.2	G5	2	..	20710b
32	4183	26.5	-46 0	6.11	6.0	B8	9	..	8952b	82	2488	26.8	-16 40	8.6	8.6	Ao	7	..	24583b
33	1128	26.5	-61 1	8.4	9.0	Ao	3	..	40088b	83	2435	26.8	-20 3	10.2	10.0	A	1	..	24583b
34	509	26.5	-74 35	7.5	8.3	G5	3	..	24452b	84	7419	26.8	-23 35	8.2	8.9	Ko	2	..	18302b
35	1893	26.6	+42 6	7.6	8.4	G5	2	..	37704i	85	4718	26.8	-36 14	8.0	7.4	B9	5	..	13073b
36	1876	26.6	+37 25	9.5	10.5	Ko	1	..	37390i	86	4319	26.8	-42 52	10.5	9.7	Ao	3	..	24747b
37	1855	26.6	+34 44	7.72	8.79	K2	3	0,1	38634i	87	1131	26.8	-60 45	8.8	9.6	F2	3	..	40088b
38	1942	26.6	+25 24	8.7	9.7	Ko	2	..	38635i	88	522	26.9	+70 4	8.6	8.7	A2	2	..	38602i
39	1750	26.6	+16 33	8.0	8.1	A2	4	..	38960i	89	2071	26.9	+40 15	9.1	9.9	G5	1	..	37390i
40	1840	26.6	+15 40	8.34	9.12	G5	2	..	38960i	90	1924	26.9	+38 14	8.3	9.3	Ko	2	..	37390i
41	2563	26.6	-5 45	9.3	10.3	Ko	1	..	19136b	91	1836	26.9	+36 46	6.14	6.48	F2	7	..	37390i
42	2625	26.6	-6 11	9.2	10.3	K2	1	..	19136b	92	2109	26.9	+20 47	5.52	6.52	Ko	8	R	37617i
43	2554	26.6	-14 10	9.2	9.3	A2	3	..	19015b	93	2108	26.9	+20 28	8.7	9.1	F5	4	0,2	10654m
44	2432	26.6	-19 50	9.3	9.8	Ao	2	..	24583b	94	1937	26.9	+13 34	8.4	9.0	Go	4	..	37628i
45	2431	26.6	-19 58	7.28	7.6	A2	7	..	18302b	95	2394	26.9	-8 31	7.78	7.78	Ao	8	..	19136b
46	5565	26.6	-27 8	9.6	9.2	Ao	2	..	13072b	96	2572	26.9	-14 0	9.2	10.3	K2	1	..	19015b
47	6152	26.6	-28 14	9.1	9.2	Ko	2	..	13072b	97	2436	26.9	-19 10	7.6	7.7	Fo	7	..	18302b
48	6272	26.6	-29 20	9.1	8.9	Fo	3	..	13072b	98	6283	26.9	-29 42	8.4	8.9	Go	1	..	13046b
49	4713	26.6	-36 23	9.3	8.1	B9	4	..	13073b	99	6388	26.9	-30 28	8.8	9.0	Ao	1	..	13046b
50	4201	26.6	-41 19	9.9	9.4	B8	4	1,1	24747b	100	5117	26.9	-33 19	7.04	7.4	Fo	7	..	12788b

## THE HENRY DRAPER CATALOGUE.

72300

8<sup>h</sup> 26<sup>m</sup>.9

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	4320	26.9	-42 45	10.2	9.7	G5	1	..	24747b	51	4244	27.2	-46 41	10.5	9.3	Ao	2	..	3993ob
2	4321	26.9	-42 50	9.1	8.8	F2	2	..	13064b	52	1132	27.2	-60 37	10.1	10.1	A	1	..	40088b
3	1707	26.9	-53 53	6.57	6.6	B9	10	..	24598b	53	698	27.2	-71 12	7.50	8.5	Ko	5	..	24527b
4	1134	26.9	-58 19	9.7	9.8	A3	1	..	40088b	54	252	27.2	-80 23	9.3	9.3	Ao	3	..	20869b
5	1833	27.0	+31 51	8.7	9.8	K2	2	..	38634i	55	251	27.3	+82 41	8.8	9.2	F5	2	..	38331i
6	1754	27.0	+16 4	7.8	8.8	Ko	4	..	38960i	56	1601	27.3	+45 32	7.80	8.08	Fo	7	..	37704i
7	1996	27.0	+3 51	8.6	9.2	G	1	..	37654i	57	1952	27.3	+22 13	9.1	9.2	A2	3	0.2	10654m
8	2628	27.0	-6 40	9.1	10.3	K5	1	..	19136b	58	2033	27.3	+19 20	8.4	8.8	F5	2	..	37617i
9	2489	27.0	-17 7	10.6	10.7	A2	1	..	24583b	59	1818	27.3	+10 26	6.30	6.30	Ao	9	..	37628i
10	2438	27.0	-19 14	5.38	5.38	Ao	..	2,10	56,85	60	1983	27.3	+6 3	7.39	8.39	Ko	5	..	37654i
11	2439	27.0	-19 50	9.3	9.5	G5	3	..	24583b	61	1997	27.3	+4 0	7.8	7.9	A2	5	..	37654i
12	2437	27.0	-20 0	9.33	9.8	G5	2	..	24583b	62	2011	27.3	-0 36	8.4	9.0	Go	2	..	22751b
13	6195	27.0	-25 37	9.1	9.1	F5	1	..	13072b	63	2377	27.3	-4 46	7.10	8.10	Ko	7	..	19136b
14	6182	27.0	-31 24	8.4	8.9	F5	2	3,1	13046b	64	2480	27.3	-15 34	10.4	11.2	G5	1	..	24583b
15	5389	27.0	-32 56	8.6	8.3	B8	3	..	12788b	65	2532	27.3	-17 33	10.2	10.2	Ao	3	..	24583b
16	5118	27.0	-33 17	9.0	8.6	A	2	..	12788b	66	7428	27.3	-23 11	8.1	7.8	Ao	5	..	18302b
17	4330	27.0	-40 10	7.85	9.1	K5	1	..	13073b	67	6200	27.3	-25 27	8.6	8.8	K2	1	..	13072b
18	4328	27.0	-40 11	7.15	7.6	B9	3	..	42221b	68	6166	27.3	-28 44	9.8	9.1	A2	2	..	13072b
19	4323	27.0	-42 19	9.1	8.5	Ao	4	..	13064b	69	4919	27.3	-34 24	9.0	9.5	B9	2	..	13046b
20	4324	27.0	-42 34	9.4	9.4	Ko	1	..	13064b	70	4328	27.3	-42 50	9.1	9.2	Go	5	5,1	24747b
21	4357	27.0	-43 42	10.2	9.8	F5	4	..	24747b	71	3379	27.3	-50 38	8.2	8.3	Fo	5	..	40275b
22	1667	27.0	-54 51	6.38	7.1	Go	8	..	24598b	72	3378	27.3	-50 48	7.0	7.2	Ao	8	..	13038b
23	1572	27.0	-55 5	7.61	7.3	Ao	5	..	24598b	73	3053	27.3	-51 46	8.3	8.4	A3	4	..	3993ob
24	1946	27.1	+24 25	6.41	7.41	Ko	7	R	38635i	74	1030	27.3	-61 32	8.6	9.5	G5	5	E	40088b
25	1842	27.1	+15 36	7.52	8.59	K2	4	..	38960i	75	894	27.3	-64 34	10.1	10.1	A	1	..	21452b
26	2064	27.1	-1 39	8.2	8.3	A2	1	..	22751b	76	2494	27.4	-16 11	9.5	10.5	Ko	1	..	24583b
27	2376	27.1	-4 27	9.0	10.0	Ko	2	..	19136b	77	2493	27.4	-16 33	9.1	9.5	F5	4	..	24583b
28	2565	27.1	-5 31	9.7	10.5	G5	1	..	19136b	78	2492	27.4	-16 49	10.6	10.7	A2	2	..	24583b
29	2565	27.1	-12 11	9.9	10.4	F8	1	..	19015b	79	2534	27.4	-18 3	7.06	7.84	G5	9	..	24583b
30	2566	27.1	-13 5	9.3	9.4	A2	2	..	19015b	80	2441	27.4	-19 54	9.2	9.2	A3	2	..	18302b
31	2490	27.1	-16 57	9.9	11.1	K5	1	..	24583b	81	6203	27.4	-25 10	8.75	8.6	B9	3	..	13072b
32	2574	27.1	-20 45	7.82	8.3	G5	5	..	18302b	82	6204	27.4	-25 16	8.6	8.8	K2	2	..	13072b
33	4916	27.1	-34 54	8.3	9.2	K5	1	..	13046b	83	4801	27.4	-37 14	7.9	8.3	Ao	4	..	13073b
34	1668	27.1	-56 7	9.5	9.5	Ao	2	..	40088b	84	4561	27.4	-38 43	7.13	7.1	B9	2	..	42221b
35	1667	27.1	-56 31	9.0	9.4	Go	3	..	40088b	85	4431	27.4	-39 53	9.3	9.1	B9	1	..	13073b
36	858	27.1	-66 26	9.4	10.4	Ko	2	..	21452b	86	4213	27.4	-42 2	9.0	10.3	K5	1	..	24747b
37	919	27.1	-69 46	5.62	5.60	B9	..	..	56,125	87	4195	27.4	-45 32	10.2	9.4	Ao	3	..	3993ob
38	523	27.2	+70 2	7.10	8.10	Ko	4	..	38602i	88	1672	27.4	-54 29	8.4	7.9	A3	4	..	24598b
39	1925	27.2	+38 30	8.9	9.9	Ko	1	..	37390i	89	1049	27.4	-59 51	8.2	8.9	G5	4	5,2	40088b
40	1877	27.2	+37 26	8.8	9.6	G5	1	..	37390i	90	222	27.4	-84 4	8.9	9.3	F5	2	..	22238b
41	1837	27.2	+36 8	7.9	8.9	Ko	1	..	37390i	91	369	27.5	+74 0	8.7	9.2	F8	4	E	37714i
42	2073	27.2	+8 49	8.8	10.2	Ma	1	..	20710b	92	1592	27.5	+47 28	6.62	6.62	Ao	9	..	37704i
43	2378	27.2	-12 5	10.2	10.2	A	1	..	19015b	93	1999	27.5	+2 30	8.4	8.5	A3	3	..	37654i
44	2491	27.2	-16 20	9.7	10.7	Ko	1	..	24583b	94	2630	27.5	-7 6	9.0	9.5	F8	1	..	19136b
45	2440	27.2	-19 43	9.7	9.8	F8	2	..	24583b	95	2575	27.5	-13 46	9.7	9.8	A2	2	..	19015b
46	6198	27.2	-25 21	7.60	7.7	Ao	7	..	13072b	96	2579	27.5	-20 28	9.2	9.2	Ko	1	..	18302b
47	4424	27.2	-39 54	10.3	9.7	B9	2	..	24747b	97	6205	27.5	-25 41	8.0	7.6	Ao	8	..	13072b
48	4208	27.2	-41 11	7.0	7.9	K2	7	2,8	13073b	98	6151	27.5	-26 5	9.8	8.9	Ao	2	..	13072b
49	4358	27.2	-43 36	9.6	9.4	Go	5	..	24747b	99	5586	27.5	-27 35	9.1	8.5	Ao	4	..	13072b
50	4477	27.2	-44 24	6.49	7.0	B5	4	..	8888b	100	5125	27.5	-33 42	8.1	9.2	Ko	1	..	13046b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

72400

8<sup>h</sup> 27<sup>m</sup>.5

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	4214	27.5	-41 50	9.3	9.7	B8	2	..	13064b	51	4929	27.8	-34 51	9.0	8.3	B9	3	..	13046b
2	4485	27.5	-44 17	9.6	8.5	Ao	4	..	13064b	52	4344	27.8	-40 7	9.30	9.7	A2	3	..	24747b
3	1675	27.5	-56 35	8.2	8.5	A2	6	..	40088b	53	4489	27.8	-44 10	9.8	9.0	B9	5	0,3	24747b
4	1674	27.5	-56 57	8.0	8.9	B9	3	..	40088b	54	4490	27.8	-44 14	10.0	9.3	Fo	3	..	24747b
5	1050	27.5	-60 2	10.1	10.1	A	1	..	40088b	55	1677	27.8	-56 16	10.0	10.0	A	1	..	40088b
6	337	27.5	-78 23	9.0	10.2	K5	2	..	22237b	56	1030	27.8	-62 56	8.6	8.7	A5	5	..	13025b
7	129	27.6	+85 33	8.2	9.0	G5	2	..	37546i	57	327	27.9	+76 7	9.7	10.3	G	3	..	37714i
8	1778	27.6	+29 32	8.7	9.7	Ko	2	..	38637i	58	1322	27.9	+52 32	7.72	8.50	G5	4	..	38188i
9	1627	27.6	+27 41	8.7	9.5	G5	3	..	38637i	59	1557	27.9	+50 44	8.5	8.6	A5	3	..	38188i
10	2112	27.6	+20 43	9.6	11.0	Mb	3	0,1	8253m	60	2018	27.9	-0 10	10.5	10.5	Ao	2	..	22751b
11	2015	27.6	-0 36	8.4	8.4	Ao	2	..	37654i	61	2401	27.9	-8 43	10.2	10.3	A3	1	..	19136b
12	2566	27.6	-5 34	6.80	7.58	G5	8	..	19136b	62	2564	27.9	-14 41	6.41	6.55	A5	6	5,10	8827b
13	2380	27.6	-11 54	9.3	10.3	Ko	1	..	19015b	63	2496	27.9	-16 27	8.8	9.8	Ko	3	..	24583b
14	2577	27.6	-13 24	9.5	9.5	Ao	3	..	19015b	64	2387	27.9	-18 36	9.9	9.9	Ao	3	..	24583b
15	2535	27.6	-17 54	10.2	10.2	Ao	3	..	24583b	65	2385	27.9	-19 0	10.2	10.7	F8	2	..	24583b
16	2382	27.6	-18 51	9.2	9.3	A2	4	..	24583b	66	5592	27.9	-27 9	8.1	8.2	B9	5	..	13072b
17	2443	27.6	-19 21	8.8	8.7	A3	4	..	18302b	67	6181	27.9	-29 1	7.8	8.2	Ko	3	..	13046b
18	6172	27.6	-28 42	10.3	9.1	A	1	R	13072b	68	6418	27.9	-30 43	8.8	9.2	Ao	1	..	13046b
19	6307	27.6	-29 52	9.6	9.3	Ao	1	..	13046b	69	5414	27.9	-32 15	9.5	9.3	F5	1	..	13046b
20	4927	27.6	-34 15	8.9	9.2	F5	1	..	13046b	70	4044	27.9	-47 45	9.2	9.3	Ko	2	..	39930b
21	4724	27.6	-35 52	8.6	9.5	F8	2	..	13073b	71	3386	27.9	-50 31	8.2	8.3	Ao	3	..	13038b
22	4217	27.6	-41 41	10.6	9.7	Ao	2	..	13064b	72	1546	27.9	-57 19	8.7	9.9	K5	1	..	40088b
23	4334	27.6	-42 50	10.2	9.4	B9	5	..	24747b	73	790	27.9	-68 17	7.8	7.9	A3	6	..	24527b
24	3606	27.6	-49 19	9.4	9.5	F8	2	..	39930b	74	2583	28.0	-14 5	6.80	7.80	Ko	9	..	19015b
25	1133	27.6	-60 46	9.1	10.1	G	1	..	40088b	75	2565	28.0	-15 1	9.5	9.8	Fo	2	..	24583b
26	859	27.6	-66 50	9.4	10.4	Ko	1	..	21452b	76	2539	28.0	-17 43	10.6	10.9	Fo	1	..	24583b
27	1926	27.7	+38 36	9.1	9.7	G	1	..	37390i	77	2540	28.0	-17 54	10.2	10.3	A2	2	..	24583b
28	1712	27.7	+33 14	9.9	10.0	A2	2	..	38634i	78	2446	28.0	-19 44	9.3	10.0	G5	2	..	24583b
29	1865	27.7	+11 37	7.8	8.4	Go	4	..	37628i	79	7068	28.0	-24 26	8.6	8.6	A5	4	..	18302b
30	2608	27.7	-2 50	7.30	7.36	A2	8	..	22751b	80	6209	28.0	-31 22	7.5	7.3	B5	5	..	12788b
31	2558	27.7	-11 4	8.1	9.1	Ko	6	..	19015b	81	4340	28.0	-42 7	10.9	9.7	Fo	3	..	24747b
32	2580	27.7	-13 22	10.4	10.4	Ao	2	..	19015b	82	4496	28.0	-44 11	10.2	9.6	Ao	4	..	24747b
33	2444	27.7	-19 38	8.2	8.7	Ko	3	..	18302b	83	4207	28.0	-45 11	9.4	9.1	Ao	2	..	39930b
34	6157	27.7	-26 22	7.9	8.2	B9	6	..	13072b	84	4258	28.0	-46 11	8.0	9.6	K5	2	..	39930b
35	4731	27.7	-36 21	7.7	8.0	Ko	3	..	13073b	85	4048	28.0	-47 32	6.50	6.8	B5	7	3,10	8952b
36	4566	27.7	-38 44	6.24	6.3	B3	..	2,6	56,125	86	1678	28.0	-56 25	9.2	9.2	Ao	3	..	40088b
37	4341	27.7	-40 38	9.3	9.1	B9	4	0,2	13064b	87	1136	28.0	-60 23	8.9	10.3	G5	2	..	40088b
38	4342	27.7	-40 49	10.3	9.4	A2	2	..	13064b	88	1031	28.0	-61 46	10.1	10.1	Ao	2	..	40095b
39	4219	27.7	-41 42	9.3	9.2	Ao	1	..	13064b	89	1629	28.1	+27 46	8.7	9.7	Ko	2	..	38637i
40	1556	27.8	+50 48	8.6	9.4	G5	2	..	38188i	90	1917	28.1	+13 53	7.6	8.4	G5	5	..	37628i
41	1743	27.8	+48 53	6.76	6.76	Ao	7	..	38184i	91	2567	28.1	-5 59	9.1	9.6	F8	2	..	19136b
42	1839	27.8	+35 0	9.12	9.18	A2	2	..	38634i	92	2560	28.1	-10 26	9.9	9.9	Ao	1	..	19015b
43	2017	27.8	-0 57	8.4	8.5	A3	4	..	22751b	93	2497	28.1	-17 1	9.9	10.9	Ko	1	..	24583b
44	2384	27.8	-3 44	8.6	9.4	G5	2	..	22751b	94	2541	28.1	-17 17	9.0	10.0	Ko	5	..	24583b
45	2582	27.8	-13 36	9.0	9.0	Ao	4	..	19015b	95	2388	28.1	-18 14	9.2	10.3	K2	2	..	24583b
46	2563	27.8	-15 4	9.01	9.01	Ao	5	..	24583b	96	7073	28.1	-24 13	9.4	9.2	F5	2	..	18302b
47	2536	27.8	-17 35	9.2	10.0	G5	3	..	24583b	97	5597	28.1	-27 9	9.8	9.1	Ao	1	..	13072b
48	2384	27.8	-18 29	9.9	10.0	A3	3	..	24583b	98	4351	28.1	-40 51	9.9	9.7	Go	3	..	24747b
49	..	27.8	-18 55	..	..	B9	3	..	24583b	99	4368	28.1	-43 24	10.2	9.4	Ao	3	..	24747b
50	6211	27.8	-25 21	9.6	8.8	A3	2	..	13072b	100	4210	28.1	-45 31	10.0	9.3	Fo	2	..	39930b

## THE HENRY DRAPER CATALOGUE.

72500

8<sup>h</sup> 28<sup>m</sup>.1

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	3863	28.1	-48 51	9.8	9.2	B9	3	..	39930b	51	4745	28.4	-35 46	9.5	9.5	B9	2	..	13073b
2	390	28.1	-77 27	8.3	8.7	F5	7	..	22237b	52	4373	28.4	-43 31	8.3	9.0	Ko	2	..	13064b
3	1950	28.2	+25 36	8.1	8.2	A3	4	..	38635i	53	4375	28.4	-44 4	9.0	9.3	G5	1	..	13064b
4	1845	28.2	+15 1	8.34	8.40	A2	4	E	37628i	54	4219	28.4	-45 47	8.5	8.2	Bo	5	..	39930b
5	1940	28.2	+13 36	6.40	7.40	Ko	7	..	37628i	55	4267	28.4	-46 54	7.0	7.0	B3	5	2,8	8952b
6	2379	28.2	-4 53	6.63	6.69	A2	10	..	19136b	56	942	28.4	-68 0	9.6	10.6	Ko	1	..	21452b
7	2402	28.2	-8 50	9.3	9.3	Ao	2	..	19136b	57	424	28.5	+73 35	8.6	9.0	F5	3	E	37714i
8	2382	28.2	-11 12	9.2	10.0	G5	2	..	19015b	58	1745	28.5	+49 35	7.77	8.05	Fo	7	..	38188i
9	2585	28.2	-13 22	8.7	9.7	Ko	3	..	19015b	59	1624	28.5	+28 47	8.7	9.5	G5	4	..	38637i
10	2390	28.2	-18 40	9.7	10.0	Fo	2	..	24583b	60	1623	28.5	+28 34	9.2	9.2	A	1	..	38637i
11	2389	28.2	-19 5	10.2	10.3	Ko	1	..	24583b	61	1997	28.5	+5 6	6.13	7.13	Ko	8	..	37654i
12	2449	28.2	-19 57	9.3	10.1	Ko	1	..	24583b	62	2021	28.5	-0 25	8.0	9.0	Ko	2	..	37654i
13	2584	28.2	-20 15	9.28	10.1	K2	2	..	24583b	63	2070	28.5	-1 28	8.8	9.6	G5	1	..	22751b
14	4581	28.2	-38 44	7.24	7.6	B9	2	..	42221b	64	2068	28.5	-1 34	8.5	9.5	Ko	4	..	22751b
15	4371	28.2	-44 5	8.8	8.4	B8	3	..	13064b	65	2613	28.5	-2 38	7.9	9.1	K5	3	..	22751b
16	4050	28.2	-47 6	9.4	8.4	F5	4	..	39930b	66	2527	28.5	-7 34	8.4	9.6	K5	2	..	19136b
17	3607	28.2	-50 2	9.62	8.9	Ao	3	..	39930b	67	2589	28.5	-13 17	8.6	9.7	K2	3	..	19015b
18	3059	28.2	-51 26	9.0	9.6	K5	1	3,1	40275b	68	2487	28.5	-15 25	7.50	8.50	Ko	7	..	24583b
19	1137	28.2	-58 53	8.6	9.9	Ko	2	0,1	40088b	69	7452	28.5	-23 53	9.8	8.9	Ao	1	..	18302b
20	253	28.3	+82 36	6.69	6.69	Ao	..	1,8	2315c	70	6221	28.5	-31 54	7.54	8.1	Ko	3	..	12788b
21	1154	28.3	+57 4	8.8	9.6	G5	1	..	37705i	71	4748	28.5	-35 24	9.0	9.5	Ao	2	..	13046b
22	1244	28.3	+54 4	8.7	9.7	Ko	3	..	38188i	72	4826	28.5	-37 35	8.3	7.8	Fo	4	..	13073b
23	1896	28.3	+42 5	9.0	9.3	F2	1	..	37390i	73	4452	28.5	-39 37	7.14	7.6	Ao	2	..	42221b
24	1840	28.3	+36 46	5.83	5.89	A2	9	..	37390i	74	4228	28.5	-41 57	9.3	9.4	Ao	2	..	13064b
25	1951	28.3	+24 56	8.81	8.81	Ao	3	..	38635i	75	4351	28.5	-42 23	9.4	9.4	K2	1	..	13064b
26	2331	28.3	+0 2	7.8	7.8	B8	7	..	37654i	76	4374	28.5	-43 29	8.4	8.5	B9	3	..	13064b
27	2612	28.3	-3 4	9.3	9.3	Ao	1	..	22751b	77	3390	28.5	-50 15	9.52	9.3	F2	2	..	39930b
28	2380	28.3	-4 59	8.0	8.5	F8	8	..	19136b	78	3063	28.5	-51 19	8.6	8.7	A3	5	..	39930b
29	2573	28.3	-12 37	9.2	10.2	Ko	2	..	19015b	79	1721	28.5	-53 45	8.3	8.5	G5	5	..	24598b
30	2569	28.3	-14 20	9.1	9.1	B9	5	..	19015b	80	984	28.5	-63 25	9.7	9.8	A5	3	..	40095b
31	2568	28.3	-14 55	9.5	9.8	Fo	4	..	24583b	81	516	28.5	-76 16	8.9	10.0	K2	3	..	22237b
32	2485	28.3	-15 45	8.2	9.2	Ko	4	..	24583b	82	370	28.6	+73 59	6.29	7.29	Ko	9	..	37714i
33	2484	28.3	-16 5	10.8	10.8	A	1	..	24583b	83	1870	28.6	+10 55	7.6	7.9	Fo	6	..	37628i
34	5601	28.3	-27 6	9.6	8.8	Ao	2	..	13072b	84	2570	28.6	-5 41	9.5	10.1	Go	2	..	19136b
35	4225	28.3	-41 42	7.7	8.3	B5	5	..	13064b	85	2636	28.6	-6 54	8.0	8.0	Ao	5	..	19136b
36	4372	28.3	-43 16	10.2	9.6	Go	2	..	24747b	86	2528	28.6	-7 49	9.7	9.7	Ao	2	..	19136b
37	4215	28.3	-45 27	7.1	7.4	B8	3	..	8888b	87	2569	28.6	-9 39	8.1	9.1	Ko	3	..	19136b
38	4053	28.3	-47 35	9.6	8.2	B3	3	..	39930b	88	2384	28.6	-11 24	9.7	10.2	F8	2	..	19015b
39	3865	28.3	-48 25	7.9	7.7	Ao	3	1,5	8952b	89	2577	28.6	-12 24	7.8	7.9	A3	7	..	19015b
40	1511	28.3	-52 21	8.6	9.0	A3	3	..	40275b	90	2575	28.6	-13 7	8.6	9.7	K2	2	..	19015b
41	1034	28.3	-61 44	8.9	10.1	K5	2	..	40095b	91	2488	28.6	-15 53	8.4	9.4	Ko	3	..	24583b
42	1181	28.4	+58 57	9.2	9.3	A5	2	..	37705i	92	2489	28.6	-15 56	9.3	9.6	Fo	2	..	24583b
43	1853	28.4	+41 22	7.58	8.36	G5	4	0,4	37390i	93	2499	28.6	-16 37	9.5	9.6	A2	4	..	24583b
44	1950	28.4	+24 19	8.7	9.8	K2	2	..	38635i	94	2545	28.6	-18 6	9.3	9.6	Fo	2	..	24583b
45	2002	28.4	+1 56	8.8	9.1	F	2	..	37654i	95	2476	28.6	-21 25	8.6	9.5	K5	2	E	24583b
46	2564	28.4	-9 17	9.2	9.2	Ao	2	..	19136b	96	2315	28.6	-22 32	9.2	8.6	Ao	3	..	18302b
47	2486	28.4	-15 47	9.9	10.5	Go	1	..	24583b	97	6230	28.6	-26 4	9.4	9.2	F8	2	..	18994b
48	2391	28.4	-18 45	9.2	9.7	F8	3	..	24583b	98	6204	28.6	-28 31	8.8	9.1	G5	3	..	18994b
49	2312	28.4	-22 28	8.5	8.9	Ko	2	..	18302b	99	6203	28.6	-28 32	10.3	8.5	B9	5	1,3	13072b
50	7449	28.4	-23 58	9.0	8.1	F5	3	..	18302b	100	4763	28.6	-36 19	7.9	7.4	B8	2	..	42221b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

72600

8h 28m.6

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	4056	28.6	-47 28	9.0	10.2	Ao	4	..	3993ob	51	1684	28.9	-56 57	9.9	10.0	A2	1	..	40088b
2	1054	28.6	-59 15	9.0	9.3	Ao	3	..	40088b	52	1554	28.9	-57 30	8.8	8.6	B9	3	..	40088b
3	1716	28.7	+33 16	8.7	9.3	Go	2	..	38634i	53	1137	28.9	-60 11	10.6	10.6	A	1	..	40088b
4	1978	28.7	+18 43	7.6	8.7	K2	2	..	37617i	54	340	28.9	-78 29	9.1	10.1	Ko	2	..	22237b
5	2006	28.7	+1 56	7.6	7.6	Ao	7	..	37654i	55	1136	29.0	+58 32	8.4	8.7	Fo	5	..	37705i
6	2390	28.7	-3 19	9.3	10.5	K5	1	..	22751b	56	1868	29.0	+21 50	9.5	10.5	Ko	2	..	10654m
7	2491	28.7	-15 21	9.9	10.0	A5	2	..	24583b	57	2127	29.0	+1 29	8.2	8.6	F5	2	..	37654i
8	2393	28.7	-18 30	9.2	9.2	Ao	4	..	24583b	58	2022	29.0	-0 11	8.88	9.30	F5	1	..	22751b
9	2586	28.7	-20 27	9.7	9.8	A	2	E	24583b	59	2075	29.0	-1 14	8.0	8.6	Go	4	..	37654i
10	4360	28.7	-40 48	9.9	9.4	B8	2	..	13064b	60	2074	29.0	-1 49	5.61	5.61	Ao	8	..	14315i
11	4232	28.7	-41 30	7.1	7.3	Ao	2	0.9	8888b	61	2572	29.0	-5 41	8.8	8.9	A2	5	..	19136b
12	1584	28.7	-55 41	9.0	8.9	Ao	2	..	40088b	62	2573	29.0	-5 54	8.4	8.4	B9	7	..	19136b
13	1140	28.7	-58 57	9.5	9.6	A2	2	..	40088b	63	2574	29.0	-6 8	8.4	9.5	K2	3	..	19136b
14	1899	28.8	+42 7	8.6	9.4	G5	2	..	37390i	64	2571	29.0	-9 39	7.66	9.01	Ma	4	..	19136b
15	1866	28.8	+21 49	8.5	9.0	F8	4	..	37617i	65	2494	29.0	-15 45	6.64	7.64	Ko	9	..	24583b
16	1871	28.8	+17 13	8.2	9.0	G5	3	E	38960i	66	2549	29.0	-17 26	9.2	9.3	A2	5	..	24583b
17	2077	28.8	+8 48	5.97	6.25	Fo	8	..	37628i	67	2452	29.0	-19 24	9.0	9.2	Fo	4	..	24583b
18	2382	28.8	-4 37	9.3	9.6	F2	3	..	19136b	68	2453	29.0	-19 26	9.2	9.6	Fo	3	..	24583b
19	2592	28.8	-13 37	9.3	10.7	Ma	2	..	19015b	69	7464	29.0	-23 41	9.3	8.3	Ao	3	..	18302b
20	2571	28.8	-14 25	9.3	10.4	K2	2	..	24583b	70	7466	29.0	-23 51	8.2	7.7	Fo	6	..	18302b
21	2492	28.8	-15 54	9.7	10.5	G5	1	..	24583b	71	6238	29.0	-25 51	8.2	8.9	Ko	1	..	13072b
22	2502	28.8	-16 22	10.8	10.9	A2	2	..	24583b	72	6215	29.0	-29 4	8.1	8.2	A2	4	..	13046b
23	2504	28.8	-16 40	9.0	10.1	K2	3	..	24583b	73	6229	29.0	-31 11	6.36	7.4	G5	8	5,7 R	13046b
24	2503	28.8	-17 8	9.2	9.5	Fo	2	..	24583b	74	4596	29.0	-38 54	9.7	9.4	A	1	..	13064b
25	2477	28.8	-21 59	8.0	9.2	K2	2	..	18302b	75	4228	29.0	-45 27	8.6	8.2	A3	7	1,3	3993ob
26	7089	28.8	-24 16	6.15	7.2	A5	10	..	18302b	76	4227	29.0	-45 41	8.6	8.4	F5	5	..	3993ob
27	5433	28.8	-32 6	9.2	8.9	Ao	2	..	13046b	77	1138	29.0	-60 8	9.25	8.9	B9	3	..	40088b
28	5154	28.8	-33 13	7.9	8.9	Ko	1	..	13046b	78	900	29.0	-65 2	9.26	10.2	Ko	2	..	21452b
29	4460	28.8	-39 9	9.3	9.1	B9	2	..	13073b	79	1631	29.1	+26 54	9.5	10.1	G	2	..	38637i
30	4235	28.8	-41 10	10.3	10.0	Ko	2	..	24747b	80	2004	29.1	+9 44	8.80	9.80	Ko	1	..	2071ob
31	4274	28.8	-46 59	8.4	9.0	K5	2	..	3993ob	81	2003	29.1	+9 15	8.8	9.4	Go	2	..	2071ob
32	3871	28.8	-48 26	9.4	10.1	K2	1	..	3993ob	82	2565	29.1	-10 37	8.0	8.0	Ao	6	..	19015b
33	1031	28.8	-62 44	8.6	9.8	Ma	5	5,2 R	40088b	83	2388	29.1	-11 52	8.6	9.6	Ko	3	..	19015b
34	861	28.8	-66 48	7.9	7.9	Ao	7	1,7	8913b	84	2593	29.1	-14 3	9.0	9.0	Ao	8	..	19015b
35	1867	28.9	+20 55	9.2	10.2	Ko	3	..	10654m	85	2550	29.1	-17 9	10.2	10.6	F5	1	..	24583b
36	2383	28.9	-4 9	8.4	8.8	F5	6	..	19136b	86	2316	29.1	-22 48	9.5	8.9	A3	1	..	18302b
37	2580	28.9	-13 0	9.2	9.5	F2	2	..	19015b	87	6352	29.1	-29 37	8.6	8.9	G5	2	..	13046b
38	2572	28.9	-14 52	8.4	8.4	Ao	7	..	19015b	88	4959	29.1	-34 18	6.16	7.0	Ko	6	..	13046b
39	2478	28.9	-22 7	8.5	8.1	A2	6	..	18302b	89	4843	29.1	-37 25	9.3	8.7	Ao	2	..	13073b
40	7462	28.9	-23 43	10.1	8.4	Ao	2	..	18302b	90	4842	29.1	-37 50	7.9	8.3	Ko	3	..	13073b
41	6236	28.9	-25 42	9.6	9.1	A3	1	..	18302b	91	4367	29.1	-40 20	9.3	9.7	F8	4	..	24747b
42	6209	28.9	-28 11	9.6	9.1	A	2	..	13072b	92	4363	29.1	-42 17	10.9	9.7	A2	2	..	24747b
43	6212	28.9	-28 17	8.8	9.4	Ko	1	..	13072b	93	4362	29.1	-42 27	9.6	9.7	Ko	3	..	24747b
44	6347	28.9	-29 38	9.0	8.9	Ao	2	..	13046b	94	4360	29.1	-42 58	9.8	9.4	F8	4	..	24747b
45	4837	28.9	-37 8	7.9	8.6	G5	3	..	13073b	95	4061	29.1	-47 56	8.4	8.1	B9	3	..	13038b
46	4464	28.9	-39 25	8.9	8.9	Ao	2	..	13073b	96	1588	29.1	-55 27	8.0	8.9	Ko	4	..	40088b
47	4465	28.9	-39 53	7.9	8.5	G5	2	..	13073b	97	1142	29.1	-58 26	9.4	9.9	F8	2	..	40088b
48	4382	28.9	-43 35	7.9	7.8	B3	6	..	13064b	98	1143	29.1	-58 53	var.	var.	Ao	5	0,2 R	40088b
49	3391	28.9	-51 3	9.8	9.5	A3	1	..	3993ob	99	1871	29.2	+11 11	8.2	9.2	Ko	3	..	37628i
50	1729	28.9	-54 3	6.20	7.3	K2	7	..	24598b	100	2005	29.2	+9 36	9.1	9.9	G5	1	..	2071ob



THE HENRY DRAPER CATALOGUE.

72700

8<sup>h</sup> 29<sup>m</sup>.2

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	2566	29.2	— 10 20	9.2	9.2	Ao	2	..	19015b	51	4232	29.4	— 45 18	9.1	9.0	Ao	4	..	39930b
2	2595	29.2	— 13 42	9.2	9.3	A5	3	..	19015b	52	4287	29.4	— 46 42	7.0	7.8	K2	5	..	13038b
3	2594	29.2	— 14 4	9.9	9.9	A	1	..	19015b	53	4066	29.4	— 47 51	10.2	9.0	Ao	1	..	39930b
4	..	29.2	— 14 19	..	..	A2	1	..	24583b	54	3621	29.4	— 49 16	7.3	6.9	Bp	4	R	8952b
5	2573	29.2	— 14 45	9.7	10.9	K5	1	..	24583b	55	3622	29.4	— 49 53	9.1	9.0	Ao	3	..	39930b
6	2496	29.2	— 15 53	9.7	10.5	G5	2	..	24583b	56	956	29.4	— 65 16	10.4	10.4	Ao	1	..	21452b
7	2505	29.2	— 16 57	9.5	10.5	Ko	1	..	24583b	57	1871	29.5	+ 20 54	8.8	9.1	Fo	3	..	37617i
8	2394	29.2	— 18 26	9.3	10.7	Mb	1	..	24583b	58	1872	29.5	+ 11 22	9.1	9.7	G	2	..	37628i
9	6234	29.2	— 31 26	9.1	9.2	Ao	1	..	13046b	59	2131	29.5	+ 1 50	7.8	8.8	Ko	2	5,2	37654i
10	4598	29.2	— 38 26	10.1	9.4	Ao	2	..	24747b	60	2024	29.5	— 0 23	7.48	8.26	G5	5	..	37654i
11	4474	29.2	— 39 36	8.9	9.7	K2	2	..	24747b	61	2642	29.5	— 6 15	8.6	8.9	F2	7	..	19136b
12	4281	29.2	— 46 15	9.6	9.9	K5	1	..	39930b	62	2390	29.5	— 12 0	8.2	9.0	G5	7	..	19015b
13	3067	29.2	— 51 55	9.4	9.0	Ao	3	..	40275b	63	2598	29.5	— 13 20	9.1	10.2	K2	2	..	19015b
14	1589	29.2	— 55 28	8.9	9.2	G5	2	..	40088b	64	2555	29.5	— 17 33	9.5	10.5	Ko	2	..	24583b
15	1689	29.2	— 56 43	9.7	9.7	Ao	2	..	40088b	65	2459	29.5	— 19 54	9.3	9.2	A2	3	..	18302b
16	1055	29.2	— 59 10	9.6	9.9	Fo	1	..	40088b	66	2486	29.5	— 21 41	7.9	8.3	A2	7	..	18302b
17	1139	29.2	— 60 40	8.9	9.5	Ao	3	..	40088b	67	2318	29.5	— 22 32	9.3	9.2	Ao	3	..	18302b
18	901	29.2	— 64 39	10.2	10.2	Ao	2	..	21452b	68	2319	29.5	— 22 47	10.2	9.9	A	1	..	18302b
19	513	29.2	— 75 1	6.86	7.1	A2	5	..	24452b	69	2317	29.5	— 23 1	7.38	8.3	G5	8	..	18302b
20	1312	29.3	+ 56 11	8.0	9.1	K2	1	..	37705i	70	5635	29.5	— 27 48	9.3	8.8	Ao	3	..	13072b
21	2117	29.3	+ 19 51	9.52	10.08	Go	2	..	10654m	71	4969	29.5	— 34 19	7.9	7.4	B5	5	..	13046b
22	1999	29.3	+ 5 51	6.93	8.11	K5	6	..	37654i	72	4393	29.5	— 43 5	8.3	8.5	F5	4	..	13064b
23	2615	29.3	— 2 55	8.4	8.4	Ao	5	..	22751b	73	4512	29.5	— 45 0	9.2	8.7	Ao	4	..	39930b
24	2596	29.3	— 13 21	8.8	9.8	Ko	2	..	19015b	74	1591	29.5	— 56 2	7.3	8.9	Ko	5	..	40088b
25	2497	29.3	— 15 17	9.7	10.0	Fo	2	..	24583b	75	1035	29.5	— 62 39	8.5	9.5	Ko	3	..	40095b
26	2499	29.3	— 15 18	10.6	10.7	A2	2	..	24583b	76	795	29.5	— 68 17	8.9	9.7	G5	3	..	21452b
27	2498	29.3	— 15 29	10.6	11.7	K2	1	..	24583b	77	1750	29.6	+ 49 43	7.37	8.72	Ma	3	..	38188i
28	2506	29.3	— 16 42	9.9	10.3	F5	2	..	24583b	78	1834	29.6	+ 42 56	6.98	7.04	A2	8	..	37704i
29	2552	29.3	— 17 24	9.2	10.3	K2	2	..	24583b	79	2118	29.6	+ 19 56	6.55	7.11	Go	7	..	37617i
30	2553	29.3	— 18 6	9.3	9.4	A5	4	..	24583b	80	1874	29.6	+ 11 38	7.44	7.94	F8	7	..	37628i
31	4240	29.3	— 41 33	8.9	9.1	B9	2	..	13064b	81	2078	29.6	+ 8 47	8.8	9.2	F5	2	..	37628i
32	4365	29.3	— 42 53	8.6	8.0	Ao	5	..	13064b	82	2618	29.6	— 2 24	8.0	8.1	A2	8	..	22751b
33	4390	29.3	— 43 42	9.0	8.2	B9	6	..	13064b	83	2386	29.6	— 4 49	9.2	9.7	F8	3	..	19136b
34	4391	29.3	— 43 57	9.4	9.0	B9	2	..	13064b	84	2583	29.6	— 12 55	8.6	9.8	K5	3	..	19015b
35	4065	29.3	— 47 23	10.5	9.1	Ao	1	..	39930b	85	2502	29.6	— 15 13	9.96	10.96	Ko	1	..	24583b
36	3393	29.3	— 50 38	7.7	8.9	F8	4	..	39930b	86	6231	29.6	— 28 21	9.6	9.2	F5	2	..	18994b
37	..	29.3	— 52 52	..	..	G5	..	R	56,125	87	4850	29.6	— 38 2	6.38	6.4	B3	..	5,5 R	56,125
38	1517	29.3	— 52 52	5.77	6.7	Ao	..	R	56,125	88	4607	29.6	— 38 23	9.5	9.4	A2	2	..	24747b
39	1144	29.3	— 58 39	9.2	9.8	Go	2	..	40088b	89	4396	29.6	— 43 54	9.8	9.3	Ao	2	..	13064b
40	702	29.3	— 71 45	7.0	7.1	A2	9	..	24527b	90	478	29.7	+ 69 18	8.0	9.0	Ko	2	..	38602i
41	1155	29.4	+ 57 43	8.7	9.5	G5	2	..	37705i	91	1156	29.7	+ 57 0	8.6	9.2	Go	3	..	37705i
42	1313	29.4	+ 56 50	8.7	9.5	G5	2	..	37705i	92	1314	29.7	+ 56 20	7.61	7.89	Fo	6	..	37705i
43	1833	29.4	+ 43 24	8.0	8.3	Fo	3	..	37390i	93	1760	29.7	+ 32 10	8.7	9.3	Go	2	..	38634i
44	2616	29.4	— 2 23	8.5	8.9	F5	5	..	22751b	94	2588	29.7	— 20 25	8.2	8.2	Ao	7	..	18302b
45	2533	29.4	— 7 57	8.6	8.6	Ao	6	..	19136b	95	7110	29.7	— 24 45	6.96	7.1	A2	8	..	18302b
46	2574	29.4	— 9 36	7.42	7.76	F2	8	..	19136b	96	6379	29.7	— 29 56	9.78	9.2	Ao	1	..	13046b
47	2574	29.4	— 14 11	9.5	10.7	K5	1	..	19015b	97	5171	29.7	— 33 39	9.2	9.5	Ao	1	..	13046b
48	2507	29.4	— 16 37	9.2	9.8	Go	4	..	24583b	98	4236	29.7	— 45 25	6.57	6.6	B5	5	..	8888b
49	2457	29.4	— 19 43	9.0	9.2	Fo	3	..	18302b	99	4292	29.7	— 46 20	10.5	9.9	Ao	1	..	39930b
50	6247	29.4	— 25 24	8.0	8.8	Ko	2	..	13072b	100	4072	29.7	— 47 16	7.1	7.2	B5	5	3,8	8952b



## ANNALS OF HARVARD COLLEGE OBSERVATORY.

72800

8<sup>h</sup> 29<sup>m</sup>.7

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
		m.	° ' "									m.	° ' "						
1	3627	29.7	-49 52	10.0	9.3	B9	2	..	3993ob	51	2396	30.0	-11 31	9.3	9.3	Ao	3	..	19015b
2	1696	29.7	-56 17	8.4	8.8	G5	5	..	40088b	52	2562	30.0	-17 15	10.2	11.2	Ko	1	..	24583b
3	1695	29.7	-56 40	9.9	9.9	A	1	..	40088b	53	2592	30.0	-20 32	9.9	9.9	A	2	E	24583b
4	1140	29.7	-60 8	9.35	10.1	G5	1	..	40088b	54	2593	30.0	-20 51	7.9	8.6	F2	5	..	18302b
5	342	29.7	-78 48	9.1	10.1	Ko	2	..	22237b	55	4980	30.0	-34 28	9.3	9.5	A	1	..	13046b
6	1867	29.8	+12 14	9.1	9.4	Fo	3	..	37628i	56	3891	30.0	-48 18	9.2	9.0	A2	3	..	3993ob
7	1825	29.8	+10 22	8.8	9.3	F8	3	..	37628i	57	1522	30.0	-52 12	8.9	8.9	Ao	3	..	40275b
8	2575	29.8	-14 11	10.3	10.4	A3	2	..	19015b	58	1683	30.0	-54 47	7.21	7.3	B9	8	..	24598b
9	2577	29.8	-14 27	10.2	11.0	G5	3	..	24583b	59	905	30.0	-64 28	9.8	9.8	Ao	2	..	19155b
10	2576	29.8	-14 55	9.5	9.8	Fo	5	..	24583b	60	535	30.1	+68 50	9.0	9.3	Fo	2	..	38602i
11	2561	29.8	-17 23	9.2	10.0	G5	4	..	24583b	61	2076	30.1	+40 6	7.57	8.57	Ko	4	..	3739oi
12	2560	29.8	-17 30	10.7	10.7	Ao	2	..	24583b	62	2127	30.1	+39 46	8.17	8.23	A2	4	..	3739oi
13	2460	29.8	-19 13	9.2	9.2	F8	4	..	24583b	63	2042	30.1	+19 14	var.	var.	Md	..	R	56,200
14	4854	29.8	-37 51	7.8	8.9	K5	4	0,2	24747b	64	2586	30.1	-12 11	9.2	10.6	Mb	1	..	19015b
15	4608	29.8	-38 56	9.0	8.8	B9	3	..	13073b	65	2563	30.1	-17 21	10.0	10.6	Go	1	..	24583b
16	4401	29.8	-43 20	9.0	7.5	Ko	7	..	13064b	66	2565	30.1	-18 3	10.0	10.0	Ao	2	..	24583b
17	4294	29.8	-46 7	10.0	9.0	Ao	4	..	3993ob	67	2397	30.1	-18 37	9.0	10.0	Ko	4	..	24583b
18	3394	29.8	-50 52	10.0	9.3	A2	2	..	3993ob	68	2595	30.1	-20 20	9.2	9.8	Ko	2	..	24583b
19	1735	29.8	-53 47	8.7	8.9	Fo	2	..	40275b	69	7490	30.1	-23 29	7.8	8.0	A5	8	..	18302b
20	1681	29.8	-55 4	7.86	7.3	Ao	5	..	40088b	70	5647	30.1	-27 43	9.0	9.9	G5	1	..	13072b
21	958	29.8	-65 20	9.8	9.8	Ao	3	..	21452b	71	6244	30.1	-28 16	9.0	8.5	B9	3	..	13072b
22	1157	29.9	+57 8	8.8	9.4	G	1	..	37705i	72	6400	30.1	-29 50	9.4	9.0	B8	1	..	13046b
23	1731	29.9	+30 23	8.7	9.2	F8	4	..	38637i	73	4861	30.1	-38 3	10.1	9.0	Ao	1	..	13073b
24	1872	29.9	+21 10	9.5	10.0	F8	4	..	10654m	74	4378	30.1	-42 26	9.8	9.1	Ao	3	..	13064b
25	2122	29.9	+20 40	8.9	8.9	Ao	4	..	37617i	75	4379	30.1	-42 41	9.8	8.8	Ao	3	..	13064b
26	2619	29.9	- 2 39	8.8	8.8	Ao	2	..	22751b	76	4525	30.1	-44 39	8.4	8.8	K2	5	..	24747b
27	2398	29.9	- 3 49	8.6	9.8	K5	1	..	22751b	77	4298	30.1	-46 42	9.6	9.9	Ko	1	..	3993ob
28	2393	29.9	-11 46	9.9	10.0	A3	2	..	19015b	78	1595	30.1	-55 8	7.36	7.5	Ao	6	..	40088b
29	2509	29.9	-16 18	9.0	10.1	K2	3	..	24583b	79	1596	30.1	-55 37	9.0	9.2	G	1	..	40088b
30	6238	29.9	-28 28	9.4	8.8	A2	2	..	13072b	80	1702	30.1	-57 3	8.8	9.4	Go	2	..	40088b
31	5179	29.9	-33 9	7.9	8.6	Ao	3	..	13046b	81	959	30.1	-65 11	7.50	7.4	B9	5	0,5	8913b
32	4610	29.9	-38 30	5.95	5.8	B8	..	1,6	56,125	82	867	30.1	-66 31	8.0	8.3	Fo	4	0,4	8913b
33	4487	29.9	-40 2	9.40	10.0	K2	2	..	24747b	83	1146	30.2	+60 48	8.4	9.5	K2	2	..	37676i
34	4250	29.9	-41 16	7.0	8.2	G5	6	0,7	13073b	84	1955	30.2	+24 24	6.84	6.84	Ao	6	..	38173i
35	4374	29.9	-42 31	9.2	9.2	Ko	4	..	24747b	85	1926	30.2	+14 29	8.4	9.2	G5	3	..	37628i
36	4375	29.9	-42 44	9.4	8.8	B8	3	..	13064b	86	1927	30.2	+13 53	8.0	8.1	A2	4	..	37628i
37	4078	29.9	-48 4	9.1	8.7	Ao	3	..	3993ob	87	2013	30.2	+ 3 38	8.9	8.9	A	1	..	37654i
38	3888	29.9	-48 49	7.4	9.0	K5	3	..	3993ob	88	2400	30.2	- 3 43	9.2	9.5	Fo	3	..	22751b
39	3890	29.9	-48 56	9.2	9.3	Go	2	..	3993ob	89	2418	30.2	- 8 22	9.2	9.2	Ao	4	..	19136b
40	1520	29.9	-53 4	8.7	8.7	Fo	3	..	40275b	90	2417	30.2	- 9 3	9.6	10.4	G5	1	..	19136b
41	1561	29.9	-57 24	9.4	9.5	A5	1	..	40088b	91	2570	30.2	-10 35	8.6	8.9	Fo	5	..	19015b
42	1056	29.9	-60 3	9.35	10.6	Ma	1	..	40088b	92	2600	30.2	-14 6	9.0	9.8	G5	5	..	19015b
43	1037	29.9	-62 0	7.9	7.5	B8	7	..	13025b	93	2510	30.2	-16 28	9.2	9.8	Go	3	..	24583b
44	515	29.9	-74 37	9.3	9.8	F8	1	..	22237b	94	2566	30.2	-17 26	10.0	10.0	Ao	3	..	24583b
45	480	30.0	+69 31	8.6	9.0	F5	2	..	38602i	95	2400	30.2	-18 24	9.2	9.3	A2	6	..	24583b
46	2123	30.0	+20 7	8.3	8.4	A2	7	..	37617i	96	4985	30.2	-35 0	9.15	9.5	A2	2	..	13046b
47	1984	30.0	+18 15	9.1	9.5	F5	3	..	10654m	97	4862	30.2	-37 51	9.2	8.3	F5	3	..	13073b
48	2335	30.0	+ 0 44	7.00	7.78	G5	7	..	37654i	98	4380	30.2	-42 17	9.0	8.5	B9	4	..	13064b
49	2646	30.0	- 6 14	9.5	10.1	Go	1	..	19136b	99	4243	30.2	-45 54	7.5	7.8	K2	2	..	13038b
50	2415	30.0	- 8 59	8.7	8.8	A2	3	..	19136b	100	4300	30.2	-46 38	6.32	7.5	K2	4	..	13038b

## THE HENRY DRAPER CATALOGUE.

72900

8<sup>h</sup> 30<sup>m</sup>.2

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1599	30.2	— 55 32	9.0	9.4	Ko	1	..	40088b	51	2603	30.5	— 20 31	9.4	9.6	A3	3	E	24583b
2	1564	30.2	— 57 33	8.7	9.7	Ko	1	..	40088b	52	2604	30.5	— 21 7	9.4	9.8	A	1	..	18302b
3	960	30.2	— 65 22	9.2	9.2	Ao	4	..	21452b	53	6249	30.5	— 28 59	9.3	9.2	F2	3	..	13072b
4	395	30.2	— 77 24	9.2	9.3	A2	2	..	24452b	54	5465	30.5	— 32 15	6.38	7.4	G5	7	..	13046b
5	643	30.3	+ 65 22	5.69	6.25	Go	7	R	38603i	55	5195	30.5	— 33 51	7.7	9.2	K2	1	..	13046b
6	1845	30.3	+ 35 11	8.8	9.8	Ko	1	..	38634i	56	4867	30.5	— 38 0	8.6	8.0	F8	4	..	13073b
7	1785	30.3	+ 29 3	8.1	9.1	Ko	4	..	38637i	57	4502	30.5	— 39 23	6.96	8.2	K2	5	..	13073b
8	2014	30.3	+ 3 5	6.48	7.48	Ko	7	..	37654i	58	4262	30.5	— 41 20	6.9	8.2	K2	6	2,7	13073b
9	2648	30.3	— 6 45	9.1	10.3	K5	1	..	19136b	59	4535	30.5	— 45 3	10.2	9.0	Ao	2	2,1	39930b
10	2398	30.3	— 11 22	9.0	9.0	B9	5	..	19015b	60	1149	30.5	— 58 14	8.9	8.9	A3	4	0,3-	40088b
11	2567	30.3	— 17 21	9.4	10.0	Go	2	..	24583b	61	946	30.5	— 67 41	9.4	9.9	F8	3	..	21452b
12	2598	30.3	— 20 13	8.73	9.5	Ko	3	..	24583b	62	425	30.6	+ 72 37	8.1	8.6	F8	3	..	38187i
13	6200	30.3	— 26 45	6.62	7.9	K2	7	..	13072b	63	1597	30.6	+ 47 27	8.0	8.3	F2	5	E	37704i
14	6245	30.3	— 28 44	8.4	8.8	Ko	2	..	13072b	64	1874	30.6	+ 21 40	9.6	10.6	Ko	1	..	10654m
15	4616	30.3	— 38 17	9.3	9.2	Go	2	..	24747b	65	1929	30.6	+ 14 8	7.8	7.8	Ao	6	..	37628i
16	4619	30.3	— 38 32	8.6	8.8	Ao	4	..	13073b	66	2018	30.6	+ 2 21	8.4	8.7	Fo	2	..	37654i
17	4258	30.3	— 41 47	9.2	9.7	G5	3	..	24747b	67	2339	30.6	— 0 6	8.58	9.76	K5	1	..	22751b
18	4410	30.3	— 43 6	9.6	8.8	B9	3	..	13064b	68	2540	30.6	— 7 38	5.61	5.67	A2p	..	R	56,85
19	4529	30.3	— 44 36	8.2	7.9	B9	5	..	13038b	69	2420	30.6	— 8 27	9.2	10.2	K	1	..	19136b
20	4303	30.3	— 46 20	10.5	9.6	A3	1	..	39930b	70	2494	30.6	— 21 13	9.2	9.5	A2	3	..	18302b
21	508	30.3	— 74 2	9.2	9.8	Go	1	..	22237b	71	6208	30.6	— 26 9	8.6	8.6	Ao	4	..	13072b
22	258	30.3	— 80 35	5.60	7.3	Ko	4	5,10	10820b	72	6251	30.6	— 28 27	9.8	9.1	F8	3	..	18994b
23	1325	30.4	+ 52 24	7.7	8.7	Ko	4	..	38188i	73	4777	30.6	— 36 21	8.3	8.0	Ao	1	..	42221b
24	2082	30.4	+ 8 31	8.8	9.2	F5	3	..	37628i	74	4250	30.6	— 45 53	9.1	9.0	Ko	2	..	39930b
25	2582	30.4	— 5 12	9.20	9.20	Ao	3	..	19136b	75	3900	30.6	— 48 9	8.6	8.4	F2	2	..	13038b
26	2581	30.4	— 10 2	9.41	9.83	F5	3	..	19015b	76	1606	30.6	— 56 3	7.2	7.1	Ao	3	2,9	42241b
27	2399	30.4	— 11 43	8.8	9.4	Go	4	..	19015b	77	988	30.6	— 63 21	9.1	10.2	K2	2	..	40095b
28	2506	30.4	— 15 45	10.0	11.2	K5	1	..	24583b	78	906	30.6	— 64 32	9.1	9.2	A2	5	..	21452b
29	2401	30.4	— 18 25	9.2	9.7	F8	4	..	24583b	79	784	30.6	— 70 30	7.5	7.6	A2	8	..	24527b
30	2402	30.4	— 18 37	9.8	11.0	K5	1	..	24583b	80	1932	30.7	+ 38 16	9.6	9.6	Ao	2	..	37390i
31	2599	30.4	— 20 57	9.2	9.2	A2	2	..	18302b	81	1636	30.7	+ 27 30	9.6	9.9	F	2	..	38637i
32	2602	30.4	— 21 7	7.92	8.4	G5	5	..	18302b	82	1809	30.7	+ 26 18	7.9	7.9	Ao	5	..	38173i
33	2324	30.4	— 23 4	9.4	9.6	Ko	1	..	18302b	83	1961	30.7	+ 22 9	9.9	10.7	G5	2	..	10654m
34	6408	30.4	— 29 5	9.8	9.5	F8	1	..	13072b	84	1770	30.7	+ 16 40	7.9	8.4	F8	3	..	37617i
35	6410	30.4	— 29 37	9.6	9.8	K2	1	..	18994b	85	1930	30.7	+ 14 7	8.9	8.9	Ao	4	..	37628i
36	4774	30.4	— 36 34	6.67	7.3	F2	4	..	42221b	86	2340	30.7	— 0 9	8.13	8.13	Ao	6	1,4	22751b
37	4501	30.4	— 39 39	9.3	8.6	B9	2	..	13073b	87	2649	30.7	— 6 38	9.4	10.4	Ko	1	..	19136b
38	4089	30.4	— 47 10	9.8	9.6	G5	1	..	39930b	88	2579	30.7	— 14 52	8.5	9.5	Ko	4	..	24583b
39	4087	30.4	— 47 33	9.6	9.0	B5	2	..	39930b	89	2509	30.7	— 15 15	9.8	9.8	Ao	2	..	24583b
40	268	30.5	+ 81 23	9.0	9.8	G5	1	..	38331i	90	2508	30.7	— 15 51	9.8	10.8	Ko	1	..	24583b
41	1786	30.5	+ 29 17	8.9	9.9	Ko	1	..	38637i	91	2498	30.7	— 21 54	7.55	8.6	Ko	7	..	18302b
42	2125	30.5	+ 20 42	8.2	8.3	A2	7	..	37617i	92	2325	30.7	— 22 57	9.4	9.9	Ko	1	..	18302b
43	1851	30.5	+ 15 39	6.28	6.42	A5	6	..	37628i	93	4873	30.7	— 37 16	6.19	7.4	K5	2	..	42221b
44	1831	30.5	+ 10 16	9.1	9.7	Go	3	..	37628i	94	4395	30.7	— 40 52	9.9	10.0	G5	2	..	24747b
45	1997	30.5	+ 6 58	6.04	6.46	F5	9	0, R	37628i	95	4398	30.7	— 40 59	10.6	9.7	Ao	2	..	24747b
46	1997	30.5	+ 6 58	7.15	7.57	F5	9	0, R	37628i	96	4268	30.7	— 41 45	7.0	8.3	Ko	5	..	13064b
47	2623	30.5	— 2 21	9.4	10.5	K2	1	..	22751b	97	4539	30.7	— 44 12	7.6	7.6	B5	7	..	13038b
48	2537	30.5	— 7 30	8.6	9.4	G5	2	..	19136b	98	1568	30.7	— 57 33	8.8	10.0	K5	1	..	40088b
49	2583	30.5	— 9 38	8.7	9.9	K5	1	..	19015b	99	505	30.7	— 75 57	8.8	9.8	Ko	1	..	22237b
50	2604	30.5	— 13 19	9.4	9.5	A2	1	..	19015b	100	1962	30.8	+ 22 32	7.8	8.4	Go	4	..	10654m

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

73000

8h 30m.8

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1875	30.8	+21 33	9.1	9.1	Ao	5	..	10654m	51	2572	31.1	-18 1	9.6	10.1	F8	3	..	24583b
2	2085	30.8	+ 8 4	8.4	9.4	Ko	3	..	37628i	52	5665	31.1	-27 28	10.3	9.4	Ao	2	..	18994b
3	2587	30.8	-10 3	9.36	9.36	Ao	3	..	19015b	53	5007	31.1	-34 43	8.9	9.5	F5	1	..	13046b
4	2572	30.8	-10 26	8.5	8.5	Ao	5	..	19015b	54	4787	31.1	-37 0	7.69	7.7	A5	1	..	42221b
5	2594	30.8	-12 43	9.4	10.4	Ko	1	..	19015b	55	4408	31.1	-40 53	8.6	8.2	B8	5	1,4-	13064b
6	2570	30.8	-18 7	10.0	11.1	K2	1	..	24583b	56	4406	31.1	-40 55	11.0	9.7	B9	2	..	24747b
7	2404	30.8	-18 41	7.8	9.0	K5	6	..	24583b	57	4275	31.1	-41 40	10.1	9.7	A2	3	..	24747b
8	5470	30.8	-32 11	9.3	8.9	Ao	2	..	13046b	58	4420	31.1	-43 8	9.6	9.4	F8	4	..	24747b
9	4540	30.8	-44 27	9.8	9.0	B9	2	..	13064b	59	4544	31.1	-44 10	9.6	9.0	B9	3	..	13064b
10	4255	30.8	-45 17	7.50	7.6	B8	2	..	8888b	60	4265	31.1	-45 43	10.9	9.6	Ao	1	..	39930b
11	4312	30.8	-46 12	10.9	9.6	A3	2	..	39930b	61	4320	31.1	-46 41	9.8	9.0	A2	2	..	39930b
12	3634	30.8	-49 36	8.3	8.9	Ao	4	..	39930b	62	4102	31.1	-47 40	11.5	9.8	Ao	1	..	39930b
13	1531	30.8	-53 0	9.3	9.3	B9	1	..	40275b	63	3637	31.1	-49 13	10.2	10.0	A	1	..	39930b
14	1609	30.8	-55 55	8.7	8.6	A2	4	..	40088b	64	3088	31.1	-51 49	7.9	8.1	A2	6	..	40275b
15	963	30.8	-65 19	9.0	9.6	Go	3	..	21452b	65	1573	31.1	-57 32	8.6	9.2	K2	4	..	40088b
16	346	30.9	+75 3	9.7	10.1	F5	2	..	38187i	66	949	31.1	-67 46	8.7	8.8	A5	5	..	21452b
17	1268	30.9	+53 45	5.74	6.52	G5	8	0,8	37705i	67	948	31.1	-68 3	9.0	10.0	Ko	4	..	21452b
18	1903	30.9	+42 9	8.7	9.7	Ko	2	..	37390i	68	1880	31.2	+11 50	9.1	9.4	Fo	3	..	37628i
19	2019	30.9	+ 2 24	7.8	7.8	B9	6	..	37654i	69	2403	31.2	-11 15	8.6	8.7	A3	5	..	19015b
20	..	30.9	-13 57	..	..	A2	2	..	19015b	70	2406	31.2	-18 43	9.2	10.2	Ko	3	..	24583b
21	2513	30.9	-17 1	9.4	10.0	Go	2	..	24583b	71	7150	31.2	-24 46	7.51	8.2	Go	5	..	18302b
22	6257	30.9	-28 33	8.4	8.2	B9	6	..	13072b	72	6225	31.2	-26 30	5.88	6.4	A2	..	2,10	56,85
23	4315	30.9	-46 28	10.9	9.6	Ao	2	..	39930b	73	6506	31.2	-30 56	7.6	9.0	Ko	3	..	13046b
24	3635	30.9	-49 18	10.5	10.0	A	1	..	39930b	74	4397	31.2	-42 29	11.5	10.0	Go	2	..	24747b
25	3636	30.9	-49 45	8.5	9.2	F	2	..	39930b	75	4422	31.2	-43 55	7.32	7.8	Ko	5	..	13064b
26	3403	30.9	-50 22	8.5	8.9	A3	5	..	39930b	76	4547	31.2	-44 5	10.0	8.4	B9	4	..	13064b
27	1710	30.9	-57 1	8.8	8.6	Ao	5	..	40088b	77	4322	31.2	-46 47	8.3	8.4	Ko	4	..	39930b
28	705	30.9	-71 23	8.2	9.4	K5	2	..	24529b	78	3404	31.2	-50 27	9.2	9.0	A2	3	..	39930b
29	1148	31.0	+60 17	6.42	6.42	Ao	8	0,9	37676i	79	1151	31.2	-58 47	10.1	10.1	Ao	2	..	40088b
30	2082	31.0	+40 9	9.5	10.3	G5	1	..	37390i	80	1628	31.3	+28 39	6.72	7.50	G5	5	..	38173i
31	1991	31.0	+18 49	8.8	10.3	F8	3	..	10654m	81	2128	31.3	+19 57	9.9	10.4	F8	3	..	10654m
32	1871	31.0	+12 13	9.1	9.5	F5	2	..	37628i	82	1835	31.3	+10 9	9.8	10.2	F5	2	..	37628i
33	1834	31.0	+10 38	8.4	9.5	K2	3	..	37628i	83	2627	31.3	- 2 18	9.4	9.8	F5	1	..	22751b
34	2084	31.0	- 1 21	8.4	8.5	A2	3	..	37654i	84	2654	31.3	- 6 40	9.4	9.7	F2	2	..	19136b
35	2596	31.0	-12 17	9.4	10.4	Ko	2	..	19015b	85	2598	31.3	-12 55	9.2	9.3	A2	2	..	19015b
36	2510	31.0	-15 39	8.8	9.1	Fo	5	..	24583b	86	2606	31.3	-14 2	9.6	10.0	F5	3	..	19015b
37	2405	31.0	-18 12	10.0	10.1	A5	3	..	24583b	87	2608	31.3	-20 52	9.2	9.3	A2	4	..	18302b
38	2466	31.0	-19 26	8.7	9.9	Ko	3	..	24583b	88	6430	31.3	-29 11	7.34	7.4	Ao	6	..	13046b
39	2467	31.0	-20 0	8.43	8.6	F2	5	..	24583b	89	5207	31.3	-33 41	6.85	8.1	K2	4	..	13046b
40	2326	31.0	-23 7	9.2	11.4	K2	1	..	18302b	90	4548	31.3	-44 11	8.2	7.9	B9	4	..	13038b
41	4783	31.0	-36 38	8.6	8.6	K5	2	..	13073b	91	3092	31.3	-51 22	10.0	9.5	G5	1	..	39930b
42	4417	31.0	-43 40	8.8	9.0	B9	3	..	13064b	92	969	31.3	-65 44	9.1	10.2	K2	4	..	21452b
43	1570	31.0	-57 48	9.0	10.0	Ko	1	..	40088b	93	1838	31.4	+43 32	8.9	9.0	A5	1	..	37390i
44	1627	31.1	+28 45	8.5	8.8	Fo	2	..	38173i	94	2083	31.4	+39 59	7.42	7.48	A2	7	..	37390i
45	2047	31.1	+19 15	8.52	8.52	Ao	4	3,2	10654m	95	1764	31.4	+32 11	8.5	8.6	A3	3	..	38634i
46	1872	31.1	+12 3	8.4	8.4	B9	7	..	37628i	96	2028	31.4	- 0 32	9.3	9.4	A3	1	..	22751b
47	2085	31.1	- 1 12	9.5	9.6	A5	2	..	22751b	97	2582	31.4	-15 3	10.3	10.4	A5	1	..	24583b
48	2575	31.1	-10 57	7.6	9.0	Ma	6	..	19015b	98	2573	31.4	-17 27	9.4	9.8	F5	2	..	24583b
49	2581	31.1	-14 31	10.3	11.1	G5	1	..	24583b	99	2408	31.4	-18 25	9.2	9.7	F8	5	..	24583b
50	2514	31.1	-16 53	10.3	10.9	G	1	..	24583b	100	2469	31.4	-19 44	9.0	8.4	Ao	6	..	24583b

## THE HENRY DRAPER CATALOGUE.

73100

8<sup>h</sup> 31<sup>m</sup>.4

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
		m.	°									m.	°						
1	2507	31.4	-21 39	9.2	9.2	B9	3	..	18302b	51	6295	31.7	-31 52	7.9	9.8	K5	1	..	13046b
2	6431	31.4	-29 24	9.6	9.3	F5	2	..	13072b	52	4422	31.7	-40 51	10.1	9.4	B9	4	I,I	24747b
3	4638	31.4	-38 20	9.3	8.8	B9	2	..	13073b	53	4555	31.7	-44 53	9.1	8.4	A0	5	..	39930b
4	4550	31.4	-44 33	9.0	9.3	K5	1	..	13064b	54	4331	31.7	-46 38	10.5	9.4	A5	1	..	39930b
5	1532	31.4	-52 44	6.88	6.8	B5	..	0,3	56,125	55	3646	31.7	-49 36	4.87	7.0	K0	..	0,9 R	28,202
6	1152	31.4	-58 41	10.1	10.1	A0	3	..	40088b	56	991	31.7	-63 30	8.2	9.3	K2	3	..	13025b
7	1145	31.4	-60 31	9.3	9.6	F2	2	..	40088b	57	971	31.7	-65 25	9.4	10.4	K0	1	..	21452b
8	698	31.5	+64 40	4.76	5.76	K0	8	R	38603i	58	1442	31.8	+51 50	8.6	9.4	G5	2	..	38188i
9	2084	31.5	+40 42	9.2	9.6	F5	1	..	37390i	59	1767	31.8	+32 35	8.1	8.9	G5	5	..	38634i
10	1848	31.5	+35 5	8.8	9.4	Go	1	..	38634i	60	1815	31.8	+26 36	7.9	8.9	K0	2	..	38173i
11	1965	31.5	+22 20	8.8	9.8	K0	3	2,2	10654m	61	2131	31.8	+20 22	9.1	9.4	F0	3	..	37617i
12	2345	31.5	+0 44	9.14	9.14	A0	2	..	22751b	62	2594	31.8	-9 51	8.2	9.2	K0	3	..	19136b
13	2407	31.5	-12 5	9.0	9.0	A0	5	..	19015b	63	2593	31.8	-10 0	9.11	10.18	K2	2	..	19015b
14	2516	31.5	-16 19	9.4	9.4	A0	4	..	24583b	64	2578	31.8	-10 13	8.11	8.11	A0	8	..	19015b
15	2409	31.5	-18 23	9.4	10.4	K0	2	..	24583b	65	2609	31.8	-20 43	8.2	9.2	K2	3	..	18302b
16	6276	31.5	-28 8	7.14	8.5	K0	6	..	13072b	66	5678	31.8	-27 35	9.0	8.8	B9	3	..	13072b
17	6517	31.5	-30 34	9.0	8.9	B9	3	..	13046b	67	4410	31.8	-42 37	9.8	9.4	F0	5	..	24747b
18	4639	31.5	-38 55	7.7	9.1	K5	1	..	13073b	68	3095	31.8	-51 10	9.6	9.3	A0	1	..	39930b
19	4520	31.5	-39 20	7.50	8.8	K5	2	..	13073b	69	1693	31.8	-54 19	8.0	8.2	B9	3	..	40275b
20	4517	31.5	-39 29	8.9	9.4	G5	2	..	24747b	70	1718	31.8	-56 41	8.9	10.0	K2	1	..	40088b
21	4519	31.5	-39 37	6.31	7.5	Go	10	..	13073b	71	1272	31.9	+53 4	6.03	7.03	K0	7	0,7	38188i
22	4416	31.5	-40 10	9.45	9.1	A0	1	..	13073b	72	1885	31.9	+37 23	7.48	7.76	F0	6	..	37390i
23	4281	31.5	-41 12	9.9	9.7	F8	2	..	24747b	73	1727	31.9	+33 1	8.7	9.2	F8	2	..	38634i
24	4432	31.5	-43 20	10.0	9.1	F2	4	..	24747b	74	2132	31.9	+20 6	8.3	8.3	A0	6	..	37617i
25	4271	31.5	-45 8	10.0	9.0	A0	3	..	39930b	75	2133	31.9	+19 53	8.20	8.26	A2	3	..	37617i
26	4105	31.5	-47 45	10.9	9.6	A0	1	..	39930b	76	2002	31.9	+7 47	8.4	8.7	F0	5	..	37628i
27	3407	31.5	-50 45	6.64	6.3	B5	4	..	4985b	77	2408	31.9	-3 43	8.4	9.4	K0	4	..	22751b
28	1714	31.5	-56 47	8.3	8.5	A0	4	..	40088b	78	2595	31.9	-9 22	7.52	8.52	K0	7	..	19136b
29	909	31.5	-64 48	9.4	10.2	G5	2	..	21452b	79	2586	31.9	-14 16	8.6	9.6	K0	5	..	19015b
30	373	31.6	+73 59	9.2	9.8	Go	2	..	38187i	80	2519	31.9	-17 3	8.6	9.6	K0	3	..	24583b
31	1269	31.6	+53 16	6.54	7.54	K0	6	0,6	38188i	81	2575	31.9	-17 51	9.4	10.4	K0	1	..	24583b
32	1440	31.6	+51 1	8.8	9.8	K	1	..	38188i	82	2514	31.9	-21 49	9.4	9.2	A0	3	..	18302b
33	1765	31.6	+32 39	7.80	7.86	A2	6	..	38634i	83	7532	31.9	-23 14	8.08	8.6	F0	7	..	18302b
34	1640	31.6	+26 59	8.8	9.2	F5	2	..	38637i	84	5222	31.9	-33 43	8.3	9.0	K0	2	..	13046b
35	2049	31.6	+19 13	8.48	8.54	A2	4	1,2	10654m	85	4288	31.9	-41 45	8.6	9.1	F8	2	..	13064b
36	2406	31.6	-3 10	8.6	9.1	F8	3	..	22751b	86	4437	31.9	-43 57	9.8	8.7	B9	3	..	13064b
37	2583	31.6	-14 47	8.0	9.1	K2	5	..	24583b	87	3920	31.9	-48 14	9.0	9.3	K0	1	..	39930b
38	2514	31.6	-15 47	9.8	10.4	Go	2	..	24583b	88	3410	31.9	-50 19	9.1	9.2	F2	2	..	39930b
39	5487	31.6	-32 13	8.74	8.9	A0	2	..	13046b	89	1146	31.9	-60 11	9.30	9.0	F0	3	0,1	40088b
40	3917	31.6	-48 28	9.2	8.3	B9	3	..	39930b	90	428	32.0	+73 31	6.93	6.93	A0	8	..	37714i
41	3643	31.6	-49 18	8.3	8.6	A0	3	..	13038b	91	567	32.0	+66 24	8.9	9.5	G	1	..	38603i
42	2129	31.7	+20 50	8.1	8.6	F8	4	..	37617i	92	1728	32.0	+33 9	6.09	7.09	K0	9	..	38634i
43	1837	31.7	+10 0	5.98	5.98	A0	10	R	37628i	93	2003	32.0	+7 5	8.6	8.9	F0	2	E	37628i
44	2592	31.7	-10 6	9.31	9.65	F2	3	..	19015b	94	1996	32.0	+6 21	8.4	9.2	G5	2	..	37654i
45	2600	31.7	-12 48	7.8	8.1	F2	7	..	19015b	95	1998	32.0	+6 19	9.1	9.2	A2	2	..	37654i
46	2609	31.7	-13 29	9.2	10.2	K	1	..	19015b	96	2658	32.0	-6 58	8.6	9.7	K2	2	..	19136b
47	2515	31.7	-15 57	9.6	10.0	F5	2	..	24583b	97	2579	32.0	-11 1	9.6	10.4	G5	1	..	19015b
48	2517	31.7	-16 17	9.8	9.9	A2	4	..	24583b	98	2517	32.0	-15 10	9.4	10.2	G5	1	..	24583b
49	2410	31.7	-18 24	10.5	10.6	A2	2	..	24583b	99	2576	32.0	-17 41	8.5	9.5	K0	4	..	24583b
50	6281	31.7	-28 56	9.1	9.4	K2	1	..	13072b	100	2516	32.0	-21 38	9.4	9.5	A3	2	..	18302b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

73200

8<sup>h</sup> 32<sup>m</sup>.0

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	6448	32.0	-29 31	9.1	8.9	Ao	1	..	13046b	51	2428	32.3	-8 20	9.6	9.7	A2	2	..	19136b
2	4413	32.0	-42 57	10.2	10.0	B8	3	..	24747b	52	2427	32.3	-8 45	8.7	9.0	Fo	3	..	19136b
3	4280	32.0	-45 53	9.6	9.1	Ao	2	..	39930b	53	2613	32.3	-13 39	8.2	8.3	A5	8	..	19015b
4	1755	32.0	-53 8	8.4	9.2	G5	1	..	40275b	54	2615	32.3	-13 42	9.2	9.2	B9	5	..	19015b
5	1581	32.0	-57 12	8.8	10.0	K2	1	..	40088b	55	5693	32.3	-27 23	9.6	8.9	Ao	2	..	13072b
6	1043	32.0	-62 58	9.1	9.9	G5	2	..	40095b	56	6456	32.3	-29 42	8.4	8.9	G5	2	..	13046b
7	801	32.0	-68 31	8.2	9.4	K5	2	..	24527b	57	6316	32.3	-31 55	6.80	8.4	Ko	5	..	13046b
8	1729	32.1	+33 49	8.5	8.6	A5	3	..	38634i	58	4539	32.3	-39 49	10.6	9.7	Ao	2	..	24747b
9	1738	32.1	+30 22	8.5	8.6	A2	4	..	38637i	59	4436	32.3	-40 59	8.9	9.7	Ko	3	..	24747b
10	2053	32.1	+19 38	6.70	6.84	A5	7	..	37617i	60	4283	32.3	-45 32	10.0	9.1	G5	1	..	39930b
11	2597	32.1	-9 11	8.6	8.7	A3	4	..	19136b	61	1858	32.4	+15 29	7.8	8.4	Go	3	..	37617i
12	2475	32.1	-19 11	9.4	10.4	Ma	1	..	24583b	62	2001	32.4	+6 3	4.18	4.18	Ao	..	R	5441c
13	2474	32.1	-19 41	9.2	9.8	Ko	3	..	24583b	63	2590	32.4	-6 7	8.2	9.0	G5	4	..	19136b
14	2329	32.1	-22 42	9.2	9.5	A2	3	..	18302b	64	2590	32.4	-14 45	9.2	10.3	K2	3	..	24583b
15	6539	32.1	-30 15	7.86	8.0	B5	4	..	13046b	65	2580	32.4	-17 31	8.8	9.8	Ko	2	..	24583b
16	4906	32.1	-37 57	8.6	8.1	B9	5	..	13073b	66	2416	32.4	-18 20	7.06	7.84	G5	9	..	24583b
17	4433	32.1	-40 31	7.3	8.2	F5	6	0.6	13073b	67	5039	32.4	-34 6	8.4	9.7	G5	1	..	13046b
18	4418	32.1	-42 13	7.6	7.7	F5	7	..	13064b	68	4833	32.4	-35 55	7.5	8.3	Ao	2	..	42221b
19	4114	32.1	-47 31	10.9	9.6	A2	1	..	39930b	69	4294	32.4	-41 12	8.1	9.1	Ko	6	0.3	24747b
20	4112	32.1	-47 37	8.6	8.2	F8	4	..	39930b	70	4449	32.4	-43 24	8.8	7.8	A5	5	..	13064b
21	3653	32.1	-49 24	8.2	9.3	K5	2	..	39930b	71	3658	32.4	-49 32	10.0	9.3	B8	2	..	39930b
22	3655	32.1	-49 31	9.4	9.3	B	2	..	39930b	72	3660	32.4	-50 0	9.08	8.7	Fo	4	..	39930b
23	1719	32.1	-56 15	9.5	9.5	Ao	2	..	40088b	73	3099	32.4	-51 28	7.6	8.4	Ko	5	..	40275b
24	1721	32.1	-56 45	8.9	10.0	K5	1	..	40088b	74	1043	32.4	-61 56	9.8	10.1	Fo	1	..	40095b
25	1768	32.2	+44 42	9.42	9.98	G	1	E	38639i	75	1046	32.4	-62 35	9.0	9.0	Ao	2	..	13025b
26	1816	32.2	+26 25	7.65	8.43	G5	4	..	38173i	76	876	32.4	-66 41	9.3	10.4	K2	3	..	21452b
27	1935	32.2	+14 49	7.84	8.84	Ko	4	..	37628i	77	1769	32.5	+44 35	8.37	9.37	Ko	2	..	38639i
28	1876	32.2	+12 29	9.1	10.1	Ko	2	..	37628i	78	1848	32.5	+31 31	8.7	9.8	K2	1	..	38634i
29	2004	32.2	+7 5	8.4	9.5	K2	1	E	37654i	79	1849	32.5	+31 3	7.65	8.72	K2	4	..	38634i
30	2088	32.2	-1 41	9.1	9.2	A5	1	..	22751b	80	1885	32.5	+11 48	7.9	8.0	A2	7	..	37628i
31	2410	32.2	-3 39	9.2	10.0	G5	1	..	22751b	81	2401	32.5	-4 35	6.21	7.21	Ko	9	..	22751b
32	2552	32.2	-7 28	8.4	8.4	Ao	5	..	19136b	82	2520	32.5	-15 40	7.74	8.74	Ko	8	..	24583b
33	2588	32.2	-14 25	8.7	9.5	G5	7	..	19015b	83	2477	32.5	-19 29	9.4	9.8	Go	2	..	24583b
34	2589	32.2	-15 7	8.81	9.81	Ko	3	..	24583b	84	4818	32.5	-36 34	9.9	9.5	Ao	1	..	13073b
35	2415	32.2	-18 42	10.0	10.8	G5	1	..	24583b	85	4544	32.5	-39 53	9.3	8.8	B5	6	3.2	24747b
36	2612	32.2	-20 17	9.28	10.1	Ko	2	E	24583b	86	3928	32.5	-48 12	7.9	8.0	B9	4	..	13038b
37	6242	32.2	-26 45	9.3	9.2	F8	2	..	18994b	87	1760	32.5	-53 51	6.5	6.8	B9	8	..	40275b
38	5692	32.2	-27 44	7.9	8.9	K2	1	..	13072b	88	1589	32.5	-57 12	9.1	9.7	Go	2	..	40088b
39	5695	32.2	-27 47	9.4	9.2	F8	3	..	18994b	89	1045	32.5	-61 9	8.1	8.3	Ao	5	..	40088b
40	6288	32.2	-28 27	8.1	8.2	B9	7	..	13072b	90	1048	32.5	-62 20	9.8	9.8	Ao	2	..	40095b
41	6540	32.2	-30 59	7.36	7.2	B8	7	..	13046b	91	349	32.5	-78 35	8.1	9.1	Ko	3	..	20869b
42	6312	32.2	-31 42	9.4	9.5	A	1	..	13046b	92	347	32.6	+74 58	8.92	9.42	F8	3	..	37714i
43	4535	32.2	-39 19	9.9	8.8	B9	3	..	13073b	93	1065	32.6	+60 58	7.7	8.0	Fo	4	..	37705i
44	4116	32.2	-47 13	7.3	7.5	K5	3	..	13038b	94	2136	32.6	+20 34	8.1	8.5	F5	5	..	37617i
45	1539	32.2	-52 25	8.8	9.0	B8	3	..	40275b	95	1839	32.6	+10 25	8.8	8.9	A2	3	..	37628i
46	1149	32.3	+59 56	7.71	8.71	Ko	3	..	37705i	96	2028	32.6	+2 1	8.2	9.2	K	1	..	37654i
47	1937	32.3	+38 32	9.1	9.6	F8	1	..	37390i	97	2591	32.6	-14 43	10.4	11.2	G5	2	..	24583b
48	1874	32.3	+34 50	9.02	9.58	Go	2	..	38634i	98	2581	32.6	-17 16	9.4	10.2	G5	2	..	24583b
49	1730	32.3	+33 30	8.1	8.2	A5	5	..	38634i	99	2417	32.6	-19 2	9.8	10.8	Ko	1	..	24583b
50	2350	32.3	-0 5	8.93	10.11	K5	1	..	22751b	100	6549	32.6	-30 25	8.0	8.9	Ao	2	..	13046b

## THE HENRY DRAPER CATALOGUE.

73300

8<sup>h</sup> 32<sup>m</sup>.6

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	4655	32.6	— 38 6	7.05	7.6	F5	2	..	42221b	51	2663	32.9	— 6 28	9.2	9.2	Ao	5	..	19136b
2	4548	32.6	— 39 34	9.3	9.1	Ao	2	..	13073b	52	2583	32.9	— 10 36	8.6	8.9	F2	6	..	19015b
3	4458	32.6	— 44 3	9.1	8.5	B9	4	..	13064b	53	2608	32.9	— 12 34	9.6	9.9	Fo	2	..	19015b
4	4344	32.6	— 46 47	10.0	8.7	A3	3	..	3993ob	54	2619	32.9	— 13 12	9.2	10.2	Ko	2	..	19015b
5	4119	32.6	— 47 30	9.4	8.5	Ao	2	..	3993ob	55	2617	32.9	— 13 29	9.2	9.5	F2	3	..	19015b
6	3932	32.6	— 48 51	10.2	9.3	A2	2	..	3993ob	56	2592	32.9	— 14 10	9.8	9.9	A2	3	..	19015b
7	1625	32.6	— 55 42	9.2	9.2	Ao	3	..	40088b	57	2527	32.9	— 16 52	9.0	9.3	Fo	5	..	24583b
8	1153	32.6	— 58 27	7.7	8.0	Fo	6	2,7-	13018b	58	2583	32.9	— 18 6	9.4	9.9	F8	3	..	24583b
9	266	32.7	+ 80 1	8.5	9.1	Go	3	..	37493i	59	2420	32.9	— 18 43	10.5	10.5	Ao	3	..	24583b
10	1770	32.7	+ 44 38	8.22	9.29	K2	1	..	38639i	60	2480	32.9	— 19 53	9.6	10.4	Ko	1	..	24583b
11	2086	32.7	+ 40 40	8.9	9.5	Go	1	..	37390i	61	2614	32.9	— 20 52	9.1	9.6	Go	2	..	18302b
12	2087	32.7	+ 39 52	9.12	9.18	A2	2	..	37390i	62	2333	32.9	— 22 23	8.2	8.6	Ao	6	..	18302b
13	1851	32.7	+ 35 6	8.3	9.3	Ko	2	..	38634i	63	6334	32.9	— 25 43	7.71	8.8	K2	4	..	18994b
14	1878	32.7	+ 12 19	9.1	9.4	F	2	..	37628i	64	6328	32.9	— 31 23	8.0	8.6	Ko	3	..	13046b
15	1886	32.7	+ 11 13	8.8	9.8	Ko	3	..	37628i	65	4825	32.9	— 36 18	9.3	9.0	Ao	2	..	13073b
16	1840	32.7	+ 9 56	6.48	6.48	Ao	8	..	37628i	66	4462	32.9	— 43 28	9.4	9.0	K2	3	..	24747b
17	2034	32.7	— 0 47	8.4	9.6	K5	1	..	22751b	67	4356	32.9	— 46 19	10.0	9.0	Fo	2	..	3993ob
18	2090	32.7	— 1 14	8.2	9.2	Ko	3	..	22751b	68	4354	32.9	— 46 48	11.5	9.6	A3	1	..	3993ob
19	2557	32.7	— 7 14	9.2	10.2	Ko	1	..	19136b	69	1702	32.9	— 54 45	7.9	7.9	B9	4	..	40275b
20	2606	32.7	— 12 16	9.6	9.6	Ao	3	..	19015b	70	880	32.9	— 66 11	9.2	9.5	Fo	4	..	21452b
21	2523	32.7	— 16 17	9.8	10.4	G	1	..	24583b	71	806	32.9	— 68 15	10.4	10.4	Ao	2	..	21452b
22	2525	32.7	— 17 9	8.4	9.2	G5	5	..	24583b	72	710	32.9	— 71 13	9.7	9.7	A	1	..	24527b
23	4658	32.7	— 38 25	9.3	8.9	A	3	R	24747b	73	711	32.9	— 71 27	7.9	7.9	B9	6	..	24527b
24	4658	32.7	— 38 25	9.3	8.9	A	3	R	24747b	74	2130	33.0	+ 38 58	8.9	9.2	F2	2	..	37390i
25	4459	32.7	— 43 41	10.0	9.6	A2	2	..	24747b	75	1878	33.0	+ 21 31	9.9	11.3	Mb	3	0,2	8253m
26	4349	32.7	— 46 9	7.2	7.5	B5	3	..	8888b	76	1842	33.0	+ 9 58	8.57	9.57	K	1	..	37628i
27	915	32.7	— 64 29	9.4	10.4	Ko	2	..	21452b	77	2005	33.0	+ 6 44	8.4	8.4	Ao	4	0,3	37654i
28	877	32.7	— 66 11	9.1	9.2	A3	4	..	21452b	78	2609	33.0	— 12 11	7.8	8.1	F2	9	..	19015b
29	648	32.8	+ 65 4	8.0	9.0	Ko	3	..	38603i	79	7558	33.0	— 23 57	8.8	8.6	Ao	4	..	18302b
30	2137	32.8	+ 20 13	9.6	10.4	G5	2	..	10654m	80	6475	33.0	— 29 30	9.3	9.8	K2	1	..	18994b
31	2021	32.8	+ 3 46	9.1	9.1	A	2	..	37654i	81	6559	33.0	— 30 18	7.9	8.4	B9	3	..	13046b
32	2607	32.8	— 12 14	6.59	6.87	Fo	5	..	8827b	82	5244	33.0	— 33 49	9.7	9.3	Ao	1	..	13046b
33	2526	32.8	— 16 35	9.4	10.4	Ko	1	..	24583b	83	5054	33.0	— 34 44	7.8	7.5	Ao	1	..	42221b
34	2419	32.8	— 18 51	9.4	9.9	F8	3	..	24583b	84	4584	33.0	— 45 4	9.24	8.5	Ao	3	..	13064b
35	6331	32.8	— 26 4	6.78	7.9	Ko	7	..	18994b	85	4292	33.0	— 45 49	9.6	9.4	G5	1	..	3993ob
36	6300	32.8	— 28 13	9.1	9.1	A3	3	..	18994b	86	4291	33.0	— 45 55	8.5	9.0	Ko	2	..	3993ob
37	6553	32.8	— 30 29	8.6	9.0	Ao	1	..	13046b	87	3419	33.0	— 50 45	9.6	9.8	Ao	1	..	3993ob
38	4442	32.8	— 40 39	9.9	9.7	Ao	3	R	24747b	88	1731	33.0	— 56 58	8.6	8.6	Ao	3	..	40088b
39	4432	32.8	— 43 3	9.6	9.4	Go	5	..	24747b	89	1591	33.0	— 57 40	4.80	6.3	Ko	..	5,7 R	28,202
40	3417	32.8	— 50 37	5.96	5.5	B9	..	0,7 R	56,125	90	1590	33.0	— 57 53	5.40	5.23	B3	..	5,8	28,202
41	3102	32.8	— 51 59	7.5	8.9	Mb	3	..	40275b	91	520	33.0	— 74 31	6.73	8.3	Ko	8	0,3	22237b
42	1852	32.9	+ 35 19	8.12	8.46	F2	4	E	37390i	92	528	33.1	+ 70 31	7.19	8.19	Ko	4	..	38602i
43	1772	32.9	+ 32 9	8.7	9.7	Ko	1	..	38634i	93	1322	33.1	+ 56 3	8.1	8.7	Go	5	..	37705i
44	1968	32.9	+ 24 2	6.84	7.34	F8	5	..	37617i	94	1329	33.1	+ 52 7	7.8	8.8	Ko	4	..	38188i
45	2138	32.9	+ 20 21	8.6	8.7	A5	4	..	37617i	95	1850	33.1	+ 35 52	7.29	7.35	A2	7	..	37390i
46	1896	32.9	+ 17 24	7.9	8.3	F5	3	..	37617i	96	1969	33.1	+ 24 47	8.61	9.61	Ko	1	..	38173i
47	1862	32.9	+ 15 13	7.69	7.97	Fo	4	..	37617i	97	2139	33.1	+ 19 51	8.85	8.99	A5	2	..	10654m
48	1953	32.9	+ 13 18	9.1	9.5	F5	3	..	37628i	98	2667	33.1	— 6 17	9.0	9.8	G5	2	..	19136b
49	1881	32.9	+ 12 50	9.1	10.1	Ko	3	..	37628i	99	2434	33.1	— 8 23	8.0	8.8	G5	5	..	19136b
50	2664	32.9	— 6 27	6.73	7.29	Go	7	..	19136b	100	2436	33.1	— 8 32	7.18	7.60	F5	9	..	19136b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

73400

8<sup>h</sup> 33<sup>m</sup>.1

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
		m.	°									m.	°						
1	2523	33.1	-21 10	9.2	9.5	A2	3	..	18302b	51	2669	33.4	-6 19	6.49	6.55	A2	8	..	19136b
2	5056	33.1	-34 18	9.5	9.7	A	1	..	13046b	52	2437	33.4	-8 55	9.6	10.2	G	1	..	19136b
3	4921	33.1	-37 38	8.6	8.6	A0	2	..	13073b	53	2585	33.4	-10 47	9.2	9.5	F0	3	..	19015b
4	4360	33.1	-46 57	10.0	9.4	A0	3	..	39930b	54	2623	33.4	-13 35	9.0	10.2	K5	3	..	19015b
5	1154	33.1	-58 17	9.0	10.1	K2	1	..	40088b	55	2528	33.4	-15 41	10.0	10.0	A0	2	..	24583b
6	934	33.1	-69 46	7.7	8.9	K5	2	..	24527b	56	2483	33.4	-19 57	8.0	9.5	K2	4	..	24583b
7	1864	33.2	+41 44	8.0	9.1	K2	3	..	37390i	57	6565	33.4	-30 9	8.00	7.7	B9	5	..	13046b
8	1631	33.2	+28 40	10.3	10.4	A3	2	..	38637i	58	5255	33.4	-33 53	10.1	9.5	A	1	..	13046b
9	1879	33.2	+21 9	10.1	11.1	K0	2	..	10654m	59	4833	33.4	-36 47	9.2	9.0	A0	2	..	13073b
10	2004	33.2	+18 19	8.4	9.8	Ma	1	..	10654m	60	4451	33.4	-40 25	9.0	8.6	B9	3	1,2	13064b
11	2021	33.2	+9 45	8.67	9.09	F5	2	..	37628i	61	4135	33.4	-47 9	8.4	7.5	A5	7	..	13038b
12	2142	33.2	+1 3	7.26	8.26	K0	7	..	37654i	62	3674	33.4	-49 54	9.2	9.3	F5	1	..	39930b
13	2092	33.2	-1 31	7.8	8.6	G5	2	E	37654i	63	3105	33.4	-51 59	8.9	8.9	F2	3	..	40275b
14	2610	33.2	-12 21	7.26	8.26	K0	9	..	19015b	64	1773	33.4	-53 8	9.1	9.1	A0	2	..	40275b
15	2611	33.2	-13 2	9.4	10.0	G	2	..	19015b	65	1630	33.4	-56 2	7.1	7.2	F2	3	..	42241b
16	2525	33.2	-15 37	9.2	10.0	G5	3	..	24583b	66	1061	33.4	-59 12	9.5	10.1	Go	2	..	40088b
17	6346	33.2	-25 57	9.6	9.2	F8	3	..	18994b	67	975	33.4	-65 41	10.1	10.4	F0	1	..	21452b
18	4308	33.2	-41 39	9.5	9.4	F0	4	..	24747b	68	713	33.4	-73 1	6.02	7.3	K0	10	..	24527b
19	4307	33.2	-41 49	10.1	10.0	A0	2	..	24747b	69	1183	33.5	+59 26	7.06	7.84	G5	5	..	37705i
20	4467	33.2	-43 44	9.6	8.4	B3	6	3,3	24747b	70	2060	33.5	+19 18	9.1	9.4	F0	4	..	10654m
21	4132	33.2	-47 15	10.5	9.0	A2	3	..	39930b	71	2026	33.5	+3 42	4.54	5.54	K0	..	O, R	56,85
22	3938	33.2	-48 59	9.2	8.9	B8	3	..	39930b	72	2438	33.5	-8 13	9.0	10.1	K2	1	..	19136b
23	1770	33.2	-53 16	8.7	9.2	F8	1	..	40275b	73	2439	33.5	-8 52	9.1	9.6	F8	2	..	19136b
24	1060	33.2	-60 3	8.30	8.4	F8	5	3,3	40088b	74	2616	33.5	-20 16	8.83	9.3	Go	5	..	24583b
25	953	33.2	-67 57	9.7	10.0	F0	2	..	21452b	75	6274	33.5	-26 36	10.3	9.2	A0	2	..	18994b
26	649	33.3	+65 40	8.4	8.8	F5	2	..	38603i	76	5257	33.5	-33 23	6.50	6.8	A5	4	..	42221b
27	1732	33.3	+32 52	6.87	8.05	K5	6	..	38634i	77	4303	33.5	-45 58	8.2	8.5	Go	3	..	39930b
28	1880	33.3	+21 9	8.8	9.8	K0	4	5,1	10654m	78	4136	33.5	-47 39	7.8	7.2	B8	8	..	13038b
29	2142	33.3	+20 28	9.5	9.9	F5	3	..	10654m	79	3108	33.5	-51 52	8.8	8.9	A3	4	..	40275b
30	2141	33.3	+20 22	8.7	8.8	A2	4	..	37617i	80	1597	33.5	-57 54	9.0	10.0	K0	1	..	40088b
31	2411	33.3	-11 23	6.53	6.53	A0	6	..	8827b	81	807	33.5	-69 0	8.5	8.5	A0	4	..	24527b
32	2612	33.3	-12 21	9.6	9.9	F2	2	..	19015b	82	571	33.6	+66 27	8.4	9.4	K0	1	..	38603i
33	2526	33.3	-15 11	8.16	9.16	K0	5	..	24583b	83	1009	33.6	+62 35	7.8	8.8	K0	2	..	38603i
34	2586	33.3	-17 43	8.6	9.6	K0	6	..	24583b	84	1842	33.6	+43 51	8.6	9.6	K0	2	..	38639i
35	2587	33.3	-18 3	9.2	9.5	F0	4	..	24583b	85	1843	33.6	+43 42	8.6	9.6	K0	1	..	38639i
36	2482	33.3	-19 10	9.8	9.9	Go	2	..	24583b	86	1866	33.6	+41 27	9.2	10.0	G5	1	..	37390i
37	7564	33.3	-23 32	8.0	8.9	A0	5	..	18302b	87	2145	33.6	+20 24	9.6	10.6	K0	2	..	10654m
38	5714	33.3	-27 50	7.9	8.2	K0	5	..	18994b	88	1843	33.6	+10 30	8.8	9.6	G5	3	..	37628i
39	6333	33.3	-31 23	8.8	8.9	A0	3	..	13046b	89	2598	33.6	-5 54	9.2	9.2	A0	3	..	19136b
40	4927	33.3	-37 34	8.4	9.5	K5	1	..	13073b	90	2670	33.6	-7 3	8.6	9.6	K0	3	..	19136b
41	4309	33.3	-41 50	9.9	9.7	F5	2	..	24747b	91	2562	33.6	-7 20	9.8	9.8	A	1	..	19136b
42	4298	33.3	-45 29	9.1	9.0	K0	2	..	39930b	92	2613	33.6	-12 19	9.6	10.6	K0	1	..	19015b
43	3104	33.3	-51 36	9.1	8.7	B9	2	..	40275b	93	2593	33.6	-14 52	9.8	9.8	A0	2	..	24583b
44	1703	33.3	-54 31	9.2	9.5	F0	1	..	40275b	94	2336	33.6	-22 43	8.8	9.2	B9	3	..	18302b
45	1594	33.3	-57 53	9.8	9.9	A2	1	..	40088b	95	6356	33.6	-25 54	5.20	5.20	A0	..	R	56,85
46	789	33.4	+63 49	7.8	9.0	K5	2	..	38603i	96	6494	33.6	-29 34	8.4	9.5	K2	2	..	13072b
47	1443	33.4	+51 47	6.96	7.74	G5	7	..	38188i	97	6495	33.6	-29 49	9.3	9.5	K2	2	..	18994b
48	1774	33.4	+32 25	8.1	9.3	K5	1	..	38634i	98	5069	33.6	-34 58	8.50	8.3	A5	4	..	13046b
49	2143	33.4	+20 2	8.1	8.4	F0	5	..	37617i	99	4861	33.6	-35 47	7.64	8.9	K5	2	..	13046b
50	2144	33.4	+19 57	8.58	8.58	A0	3	..	10654m	100	4573	33.6	-39 21	9.7	8.8	B8	1	..	13073b



## THE HENRY DRAPER CATALOGUE.

73500

8<sup>h</sup> 33<sup>m</sup>.6

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	4475	33.6	—43 28	7.8	7.0	G5	5	..	13064b	51	4446	33.8	—42 27	10.2	9.7	Ao	2	..	24747b
2	4474	33.6	—43 46	var.	var.	Ko	3	R	13064b	52	791	33.9	+63 27	8.4	8.4	Ao	2	..	38603i
3	1545	33.6	—52 41	8.3	8.3	Ao	5	..	40275b	53	1162	33.9	+57 3	8.4	9.2	G5	3	..	37705i
4	1735	33.6	—56 21	7.2	7.2	F5	3	..	42241b	54	1844	33.9	+43 29	8.9	10.0	K2	1	..	38639i
5	1002	33.6	—63 5	8.6	9.8	K5	1	..	13025b	55	1902	33.9	+17 50	8.3	8.8	F8	3	..	37617i
6	184	33.6	—84 45	8.8	10.0	K5	3	..	22238b	56	2023	33.9	+9 16	8.8	9.4	G	2	..	37628i
7	..	33.7	+50 30	var.	var.	Md	..	R	M	57	2034	33.9	+2 29	8.2	9.2	Ko	2	..	37654i
8	1734	33.7	+33 5	6.87	7.87	Ko	8	..	38634i	58	2420	33.9	—3 34	9.0	9.1	A2	3	..	22751b
9	1797	33.7	+28 51	8.8	9.4	Go	3	..	38637i	59	2602	33.9	—5 49	8.6	9.6	Ko	2	..	19136b
10	1969	33.7	+24 59	8.81	9.59	G5	1	..	38173i	60	2533	33.9	—15 45	9.6	10.4	G5	2	..	24583b
11	1881	33.7	+21 40	10.1	10.6	F8	3	..	10654m	61	2534	33.9	—16 39	8.1	8.9	G5	5	..	24583b
12	2008	33.7	+7 20	8.2	9.2	Ko	3	E	37628i	62	2619	33.9	—20 54	9.4	10.4	K2	1	..	24583b
13	2407	33.7	—4 18	9.2	10.3	K2	2	..	22751b	63	7220	33.9	—24 17	9.6	8.9	Ao	2	..	13072b
14	2599	33.7	—6 4	9.1	9.4	Fo	3	..	19136b	64	6323	33.9	—28 33	10.3	9.1	Ao	1	..	13072b
15	2588	33.7	—10 28	8.06	8.12	A2	7	..	19015b	65	6503	33.9	—29 53	9.0	9.0	A5	3	..	13072b
16	2594	33.7	—14 55	8.0	9.0	Ko	6	..	24583b	66	4583	33.9	—40 1	10.1	9.1	Ao	2	..	13064b
17	2531	33.7	—15 44	10.0	11.0	Ko	1	..	24583b	67	4322	33.9	—42 0	8.6	8.8	B8	4	..	13064b
18	2532	33.7	—16 55	8.6	10.0	Ma	2	..	24583b	68	4602	33.9	—44 51	8.4	8.2	B3	4	..	13064b
19	2485	33.7	—20 5	8.93	9.5	Fo	4	..	24583b	69	1548	33.9	—52 10	7.3	8.0	Fo	7	5,2	40275b
20	7570	33.7	—23 35	9.3	8.9	Ao	2	..	18302b	70	1738	33.9	—56 31	8.6	7.9	Ao	1	..	42241b
21	5536	33.7	—33 1	8.1	8.6	B8	2	..	13046b	71	266	33.9	—80 46	10.0	10.1	A3	1	..	20869b
22	4934	33.7	—37 21	7.9	9.2	K5	1	..	13073b	72	1857	34.0	+31 23	8.1	9.1	Ko	2	..	38634i
23	4935	33.7	—37 51	9.3	8.6	Ao	5	..	24747b	73	1798	34.0	+29 38	8.6	9.4	G5	2	..	38637i
24	4574	33.7	—39 48	6.43	6.7	Go	7	..	13073b	74	2148	34.0	+20 27	8.1	8.2	A3	5	..	37617i
25	4453	33.7	—40 20	7.35	7.9	Ao	6	0,5	13073b	75	2149	34.0	+20 9	6.68	6.96	Fo	8	..	37617i
26	4454	33.7	—40 58	9.3	9.4	G5	2	..	13064b	76	2064	34.0	+19 38	7.8	7.9	A3	5	..	37617i
27	4317	33.7	—41 14	10.3	9.7	Ao	3	..	24747b	77	2065	34.0	+18 55	8.4	8.5	A2	4	..	10654m
28	4476	33.7	—43 11	8.0	7.5	A2	6	..	13064b	78	1789	34.0	+16 30	7.8	8.9	K2	2	..	37617i
29	3679	33.7	—49 24	9.0	10.0	B8	2	..	39930b	79	1845	34.0	+10 44	9.8	9.8	Ao	2	..	37628i
30	270	33.8	+80 51	8.47	8.61	A5	4	..	37493b	80	2671	34.0	—6 29	7.10	7.10	Ao	8	..	19136b
31	374	33.8	+74 41	8.6	9.2	Go	3	..	37714i	81	2440	34.0	—8 12	8.6	9.6	Ko	3	..	19136b
32	2090	33.8	+40 41	8.1	8.4	Fo	3	..	37390i	82	2413	34.0	—11 16	9.0	9.8	G5	2	..	19015b
33	2147	33.8	+20 32	9.5	10.5	Ko	1	..	10654m	83	2618	34.0	—12 54	9.2	10.2	K	1	..	19015b
34	1956	33.8	+13 19	8.4	9.2	G5	3	..	37628i	84	2596	34.0	—14 22	8.8	9.8	Ko	5	..	19015b
35	2098	33.8	+7 56	8.6	9.6	K	1	..	37628i	85	2620	34.0	—21 1	9.4	10.1	G5	2	..	24583b
36	2601	33.8	—5 35	8.4	9.2	G5	4	..	19136b	86	6281	34.0	—26 17	8.0	9.1	Ko	3	..	18994b
37	2412	33.8	—11 20	10.0	11.2	K5	1	..	19015b	87	5077	34.0	—34 32	8.1	8.1	Ao	5	..	13073b
38	2616	33.8	—12 51	8.6	8.9	Fo	3	..	19015b	88	4455	34.0	—40 5	7.1	8.5	Ma	3	0,3	13064b
39	2595	33.8	—14 50	9.4	9.5	A2	3	..	24583b	89	4375	34.0	—46 51	9.2	8.1	B8	4	1,2	39930b
40	2487	33.8	—19 14	9.2	10.4	K5	2	..	24583b	90	882	34.0	—66 16	10.4	10.4	Ao	2	..	21452b
41	2486	33.8	—19 20	9.1	9.3	F2	4	..	24583b	91	524	34.0	—77 5	9.5	9.5	Ao	3	..	22237b
42	2529	33.8	—21 49	8.8	9.2	F5	2	..	18302b	92	1421	34.1	+46 46	8.6	9.4	G5	1	..	38625i
43	2337	33.8	—22 10	8.8	9.5	F5	3	..	18302b	93	1422	34.1	+46 11	5.52	6.52	Ko	8	..	38625i
44	6360	33.8	—25 51	9.1	9.1	F5	2	..	18994b	94	1774	34.1	+43 53	9.2	10.0	G5	2	..	38639i
45	6277	33.8	—26 45	9.6	9.2	Ao	4	..	18994b	95	1736	34.1	+33 22	8.1	9.3	K5	1	..	38634i
46	6280	33.8	—26 51	11.3	9.7	A	2	..	18994b	96	1776	34.1	+32 19	6.14	6.48	F2	8	..	38634i
47	5720	33.8	—27 44	9.8	9.2	A2	2	..	18994b	97	1882	34.1	+20 55	9.2	9.5	Fo	4	..	10654m
48	6500	33.8	—29 29	9.6	9.5	A3	2	..	18994b	98	2150	34.1	+19 54	6.68	7.68	Ko	5	..	37617i
49	6502	33.8	—29 45	10.1	9.5	A2	2	..	18994b	99	2099	34.1	+8 22	6.49	7.49	Ko	7	..	37628i
50	4319	33.8	—41 10	9.2	8.6	B9	5	..	13064b	100	2647	34.1	—2 41	8.7	9.0	F2	4	..	22751b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

73600

8<sup>h</sup> 34<sup>m</sup>.1

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	2607	34.1	— 9 40	8.0	9.0	Ko	5	..	19136b	51	7228	34.3	— 24 41	9.0	9.1	F5	1	..	18302b
2	2593	34.1	— 18 5	8.6	8.7	A5	7	..	24583b	52	5087	34.3	— 34 12	9.7	9.5	Ao	2	..	40081b
3	2489	34.1	— 19 23	6.53	8.2	K5	6	0,8	18302b	53	4949	34.3	— 37 39	6.91	6.6	B8	3	..	42246b
4	6365	34.1	— 26 4	8.0	9.4	K5	3	..	18994b	54	4684	34.3	— 38 25	8.6	8.6	B8	3	..	13073b
5	4845	34.1	— 36 6	9.0	8.7	Fo	2	..	13046b	55	4463	34.3	— 40 13	9.9	9.1	Ao	2	1,2	13073b
6	4460	34.1	— 40 29	8.3	8.6	A2	4	0,4	13073b	56	4330	34.3	— 41 27	9.3	9.1	Ao	3	..	13064b
7	4145	34.1	— 47 38	10.2	8.7	Ao	2	..	39930b	57	4328	34.3	— 41 58	7.9	8.8	Ko	4	..	13064b
8	3949	34.1	— 48 9	10.2	9.6	A2	1	..	39930b	58	4322	34.3	— 45 56	7.1	7.2	B5	4	..	8888b
9	3950	34.1	— 49 4	7.0	7.0	Ao	7	..	13038b	59	3113	34.3	— 51 43	9.6	9.3	Ao	1	..	40275b
10	3431	34.1	— 50 27	9.6	9.6	F8	1	..	39930b	60	1150	34.3	— 60 7	9.55	9.5	A2	2	0,1	40088b
11	1551	34.1	— 53 3	9.5	9.5	Ao	1	..	40275b	61	410	34.3	— 77 26	9.4	9.8	F5	1	..	22237b
12	1602	34.1	— 57 52	9.0	9.4	F5	2	..	40088b	62	1857	34.4	+ 35 11	8.6	9.6	Ko	2	..	38634i
13	883	34.1	— 66 59	9.8	9.9	A2	5	..	21452b	63	1822	34.4	+ 26 34	8.9	9.2	F2	1	..	38637i
14	1184	34.2	+ 59 25	7.81	8.09	Fo	5	..	37705i	64	1823	34.4	+ 26 26	8.9	9.3	F5	2	..	38637i
15	1940	34.2	+ 38 32	7.8	8.8	Ko	3	..	37390i	65	2158	34.4	+ 20 22	6.48	7.48	Ko	6	0,5	10654m
16	2154	34.2	+ 20 32	9.5	9.6	A5	4	..	10654m	66	2159	34.4	+ 20 20	6.52	6.52	Ao	8	..	37617i
17	2155	34.2	+ 20 23	9.6	9.6	A	2	R	10654m	67	1888	34.4	+ 11 53	7.9	8.7	G5	5	..	37628i
18	2152	34.2	+ 19 55	6.94	6.94	Ao	6	..	10654m	68	2007	34.4	+ 6 8	7.8	8.6	G5	6	..	37654i
19	2153	34.2	+ 19 54	7.15	7.15	Ao	6	..	10654m	69	2410	34.4	— 4 31	8.0	9.1	K2	3	..	22751b
20	2013	34.2	+ 18 43	9.1	9.4	Fo	3	..	10654m	70	2411	34.4	— 4 44	8.8	9.1	Fo	4	..	22751b
21	2146	34.2	+ 1 31	8.4	9.0	Go	3	..	37654i	71	2628	34.4	— 13 12	8.6	8.9	Fo	4	..	19015b
22	2415	34.2	— 11 45	8.2	8.3	A2	7	..	19015b	72	2599	34.4	— 14 49	9.2	10.2	Ko	2	..	24583b
23	2416	34.2	— 12 9	9.4	10.5	K2	1	..	19015b	73	2535	34.4	— 16 2	9.2	9.3	A2	3	..	24583b
24	2619	34.2	— 12 29	8.6	8.9	F2	6	..	19015b	74	2536	34.4	— 16 40	10.0	10.0	Ao	2	..	24583b
25	2534	34.2	— 15 40	9.6	10.6	Ko	1	..	24583b	75	2425	34.4	— 18 21	9.4	9.5	A3	4	..	24583b
26	2424	34.2	— 18 46	10.0	10.5	F8	1	..	24583b	76	4455	34.4	— 42 12	9.1	9.4	Ko	5	..	24747b
27	2621	34.2	— 20 24	9.8	9.9	Ao	3	..	24583b	77	4389	34.4	— 46 7	10.0	9.6	F2	1	..	39930b
28	5732	34.2	— 27 52	8.4	9.2	Ko	2	..	18994b	78	4388	34.4	— 47 1	var.	var.	G5	3	R	39930b
29	5731	34.2	— 28 1	9.6	9.2	A3	2	..	18994b	79	3432	34.4	— 50 39	9.6	9.0	Ao	2	..	40275b
30	6512	34.2	— 29 38	8.1	9.0	K5	1	..	13046b	80	3434	34.4	— 50 55	9.1	9.2	Ko	2	..	40275b
31	4595	34.2	— 39 42	9.3	9.1	B9	1	..	13073b	81	1552	34.4	— 52 54	7.4	7.3	Ao	7	..	40275b
32	4596	34.2	— 40 1	7.9	8.8	K2	2	2,1	13073b	82	1744	34.4	— 56 6	9.1	9.7	Go	1	..	40088b
33	4325	34.2	— 41 14	10.6	9.7	Ao	2	..	24747b	83	977	34.4	— 66 1	8.9	8.9	Ao	7	..	21452b
34	4451	34.2	— 42 38	4.13	4.27	A5	..	5,8R	28,202	84	351	34.4	— 78 21	9.0	10.2	K5	3	..	22237b
35	3952	34.2	— 48 33	8.4	8.4	F5	4	..	39930b	85	1877	34.5	+ 34 15	8.5	9.6	K2	1	..	38634i
36	1604	34.3	+ 47 50	7.60	8.16	Go	6	..	38625i	86	2427	34.5	— 3 40	8.2	9.2	Ko	5	..	22751b
37	2091	34.3	+ 40 23	7.58	7.86	Fo	5	..	37390i	87	2620	34.5	— 12 23	6.56	6.56	Ao	5	..	8827b
38	1738	34.3	+ 33 38	6.82	7.82	Ko	8	..	38634i	88	2601	34.5	— 15 9	9.6	9.9	Fo	2	..	24583b
39	1883	34.3	+ 21 26	9.9	10.3	F5	3	..	10654m	89	2537	34.5	— 15 13	10.3	10.9	G	1	..	24583b
40	2156	34.3	+ 20 30	10.1	10.9	G5	..	..	M	90	2536	34.5	— 16 2	10.4	11.4	Ko	1	..	24583b
41	2066	34.3	+ 19 34	9.3	9.7	F5	2	..	10654m	91	2537	34.5	— 16 56	9.2	10.2	Ko	1	..	24583b
42	2067	34.3	+ 19 18	9.8	9.9	A3	1	..	10654m	92	2595	34.5	— 17 38	9.2	10.3	K2	1	..	24583b
43	1886	34.3	+ 12 21	9.1	9.4	Fo	2	..	37628i	93	5280	34.5	— 34 5	8.3	9.5	Ko	2	..	40081b
44	1887	34.3	+ 11 55	10.5	11.1	G	1	R	37628i	94	4885	34.5	— 35 51	8.6	9.5	Ko	2	..	13073b
45	2425	34.3	— 3 20	9.2	10.2	Ko	1	..	22751b	95	4689	34.5	— 39 3	8.6	9.1	B8	2	..	13064b
46	2426	34.3	— 4 9	9.4	9.4	A	2	..	22751b	96	4604	34.5	— 39 11	7.9	9.7	K	1	R	13064b
47	2566	34.3	— 7 40	9.2	10.4	K5	1	..	19136b	97	4606	34.5	— 39 24	10.3	9.1	B9	2	..	13073b
48	2597	34.3	— 14 19	8.8	10.0	K5	3	..	19015b	98	4605	34.5	— 39 31	8.9	8.8	B8	2	..	13073b
49	2490	34.3	— 19 45	9.2	11.0	Mb	1	..	24583b	99	4603	34.5	— 39 44	7.5	7.7	B5	5	..	13073b
50	2623	34.3	— 20 17	9.23	10.1	K2	2	..	24583b	100	4616	34.5	— 44 8	8.8	9.3	Ko	2	..	13064b

THE HENRY DRAPER CATALOGUE.

73700

8<sup>h</sup> 34<sup>m</sup>.5

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1065	34.5	-59 58	7.80	7.7	B9	5	..	41151b	51	2496	34.8	-20 4	9.28	9.6	A0	5	..	24583b
2	918	34.5	-64 54	9.5	9.5	B9	4	..	21452b	52	2345	34.8	-22 19	5.13	6.2	G5	..	5,10	56,125
3	650	34.6	+65 35	8.4	8.5	A3	1	..	38603i	53	6343	34.8	-29 0	8.6	9.1	K0	2	2,2	18994b
4	2137	34.6	+39 22	9.1	9.2	A5	2	..	37390i	54	5286	34.8	-33 31	7.56	8.9	G5	6	..	40081b
5	1803	34.6	+28 56	8.7	9.7	K0	3	..	38637i	55	5284	34.8	-33 41	9.2	9.2	A5	3	..	40081b
6	1826	34.6	+26 8	9.1	9.6	F8	2	..	38637i	56	4497	34.8	-43 45	10.0	9.3	A2	2	..	13064b
7	1885	34.6	+21 29	10.1	11.5	Ma	1	..	8253m	57	4332	34.8	-45 14	7.54	8.1	K2	2	..	13038b
8	1884	34.6	+21 12	9.9	10.7	G5	2	..	10654m	58	3962	34.8	-48 23	9.6	8.7	B9	4	..	39930b
9	2165	34.6	+20 3	8.7	8.7	A0	5	..	10654m	59	1620	34.9	+45 15	7.87	8.21	F2	5	..	38625i
10	2166	34.6	+20 1	6.40	7.18	G5	5	0,6	10654m	60	1858	34.9	+36 20	8.0	8.5	F8	2	..	37390i
11	2163	34.6	+19 53	7.40	7.40	A0	6	..	10654m	61	1804	34.9	+29 33	8.8	9.9	K2	1	..	38637i
12	2069	34.6	+19 43	6.85	7.13	F0	6	..	37617i	62	1886	34.9	+21 35	9.9	10.5	Go	2	..	10654m
13	2011	34.6	+3 54	8.6	9.6	K0	1	..	37654i	63	2073	34.9	+19 34	8.0	8.1	A5	4	..	37617i
14	2610	34.6	-9 13	8.0	8.0	A0	5	..	19136b	64	2011	34.9	+6 55	6.63	7.63	K0	7	0,7	37628i
15	2539	34.6	-15 29	10.3	10.4	A2	2	..	24583b	65	2099	34.9	-1 32	8.9	9.5	Go	2	..	22751b
16	2538	34.6	-15 40	7.8	7.8	A0	8	..	24583b	66	2612	34.9	-9 14	var.	var.	Mb	4	R	19136b
17	2491	34.6	-19 38	9.2	9.9	G5	4	..	24583b	67	2613	34.9	-10 7	8.46	9.24	G5	3	..	19015b
18	2535	34.6	-21 44	8.1	8.3	A0	5	..	18302b	68	2633	34.9	-14 8	8.2	9.2	K0	5	..	19015b
19	6290	34.6	-26 53	9.3	8.9	F0	4	..	18994b	69	2539	34.9	-16 29	10.3	11.3	K	1	..	24583b
20	4886	34.6	-35 28	8.7	8.6	A0	3	..	13046b	70	2429	34.9	-18 30	8.6	8.9	F2	7	..	24583b
21	4333	34.6	-41 44	8.6	9.4	K0	2	..	13064b	71	2624	34.9	-21 6	9.2	9.8	G	3	E	24583b
22	1554	34.6	-52 17	8.9	9.0	F5	2	..	40275b	72	6530	34.9	-29 23	9.1	9.8	K5	1	..	18994b
23	1066	34.6	-59 45	10.0	10.1	A2	1	..	40088b	73	4499	34.9	-43 45	9.4	9.4	K0	1	..	13064b
24	937	34.6	-69 31	9.3	9.4	A2	3	..	19155b	74	4500	34.9	-43 57	9.6	9.3	B9	2	..	13064b
25	792	34.7	+63 41	8.4	9.4	K0	1	..	38603i	75	4161	34.9	-47 27	10.5	9.4	B9	1	..	39930b
26	1323	34.7	+56 29	8.9	9.5	Go	2	..	37705i	76	3692	34.9	-49 44	7.6	8.4	K0	4	..	39930b
27	1857	34.7	+36 33	8.1	8.7	Go	1	..	37390i	77	1557	34.9	-52 31	8.8	9.6	G5	1	..	40275b
28	1878	34.7	+34 32	8.8	9.3	F8	1	..	38634i	78	1784	34.9	-53 50	8.8	8.8	F0	2	..	40275b
29	2169	34.7	+20 33	9.1	9.1	A0	4	..	37617i	79	1752	34.9	-56 8	9.7	9.7	A	1	..	40088b
30	2168	34.7	+20 12	8.7	8.7	A0	4	..	37617i	80	1055	34.9	-62 32	9.0	9.3	F2	3	..	40095b
31	2171	34.7	+19 54	6.32	6.38	A2	8	R	37617i	81	920	34.9	-64 18	8.0	8.0	A0	4	1,7	8913b
32	1890	34.7	+11 25	8.6	8.9	F0	4	..	37628i	82	886	34.9	-66 34	10.1	10.4	F2	2	..	21452b
33	2570	34.7	-7 51	9.2	10.3	K2	1	..	19136b	83	1324	35.0	+56 45	8.6	8.6	B9	4	..	37705i
34	2418	34.7	-11 43	10.3	10.4	A2	2	..	19015b	84	1651	35.0	+27 27	8.5	9.6	K2	1	..	38637i
35	2343	34.7	-23 3	9.4	9.5	A0	1	..	13144b	85	2172	35.0	+20 5	6.72	6.86	A5	8	..	37617i
36	7238	34.7	-24 44	8.1	8.5	F2	3	..	13072b	86	1946	35.0	+14 44	7.99	7.99	A0	5	..	37628i
37	6527	34.7	-30 2	8.20	8.4	B9	4	..	13046b	87	1961	35.0	+13 10	9.3	9.6	F0	2	..	37628i
38	4627	34.7	-44 59	8.54	8.1	B9	3	..	13038b	88	2013	35.0	+7 4	8.4	9.4	K0	2	..	37654i
39	4393	34.7	-46 33	7.4	8.7	Ma	2	..	13038b	89	2541	35.0	-15 9	9.4	10.0	Go	2	..	24583b
40	1780	34.7	-53 15	8.1	8.5	G5	3	..	40275b	90	..	35.0	-15 43	..	..	A2	1	..	24583b
41	1050	34.7	-61 37	7.9	8.3	A2	4	..	13025b	91	2597	35.0	-17 55	7.09	7.15	A2	10	..	24583b
42	919	34.7	-64 28	8.4	8.4	A0	6	0,3	21452b	92	2625	35.0	-20 34	9.2	9.8	F5	3	..	24583b
43	809	34.7	-68 6	8.5	8.5	A0	7	0,4	21452b	93	7593	35.0	-23 27	9.3	9.5	F8	2	..	18302b
44	525	34.7	-76 35	8.1	8.7	Go	4	..	24452b	94	1643	35.0	-55 55	8.9	9.2	G5	2	..	40088b
45	1070	34.8	+61 17	7.46	8.46	K0	5	..	37705i	95	267	35.1	+80 50	8.4	8.7	F0	3	..	37493i
46	2072	34.8	+19 33	9.1	9.2	A5	4	..	10654m	96	291	35.1	+78 3	7.64	7.92	F0	7	..	37714i
47	2444	34.8	-8 51	8.0	9.1	K2	3	..	19136b	97	430	35.1	+73 39	7.40	7.46	A2	7	..	37714i
48	2538	34.8	-17 4	9.2	10.2	K0	1	..	24583b	98	2173	35.1	+20 38	8.9	9.0	A2	3	..	37617i
49	2428	34.8	-18 11	10.0	10.1	A2	3	..	24583b	99	1892	35.1	+11 17	6.93	7.93	K0	6	..	37628i
50	2495	34.8	-19 58	10.0	10.6	K0	1	..	24583b	100	2014	35.1	+7 31	8.6	8.9	F0	4	2,3-	22648i

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

73800

8<sup>h</sup> 35<sup>m</sup>.1

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	2039	35.1	+ 2 17	6.86	7.93	K2	6	..	37654i	51	1718	35.3	- 54 48	8.8	9.9	K2	1	..	40275b
2	2419	35.1	-11 30	9.6	10.4	G5	1	..	19015b	52	981	35.3	- 65 15	9.4	10.2	G5	3	..	21452b
3	R	35.1	-19 3	..	..	A2	1	..	24583b	53	2139	35.4	+ 39 31	8.6	9.4	G5	1	..	3739oi
4	2626	35.1	-20 9	9.28	9.9	F5	2	..	24583b	54	2177	35.4	+ 20 11	9.5	9.8	Fo	2	..	10654m
5	2538	35.1	-21 34	8.1	9.5	K5	2	..	18302b	55	2075	35.4	+ 18 51	8.9	9.7	G5	3	..	10654m
6	5750	35.1	-28 1	7.8	8.2	Fo	7	..	18994b	56	1963	35.4	+ 13 29	9.3	9.9	Go	2	..	37628i
7	5290	35.1	-33 39	9.5	9.8	A3	1	..	40081b	57	1848	35.4	+ 10 11	7.53	7.81	Fo	6	..	37628i
8	4624	35.1	-39 43	7.5	9.1	Ko	2	..	13073b	58	2416	35.4	- 4 46	9.2	9.6	F5	2	..	19136b
9	4473	35.1	-40 40	10.6	9.7	Fo	2	R	24747b	59	2608	35.4	- 14 40	7.91	9.26	Ma	4	..	19015b
10	4337	35.1	-41 14	8.9	8.5	B9	4	..	13064b	60	2609	35.4	- 14 53	10.3	10.6	F2	2	..	24583b
11	4469	35.1	-42 5	8.4	7.9	B9	7	0.4	13064b	61	2542	35.4	- 16 54	9.2	10.0	G5	3	..	24583b
12	4633	35.1	-44 34	9.6	9.6	K5	1	..	13064b	62	2603	35.4	- 17 21	9.6	10.6	Ko	2	..	24583b
13	4395	35.1	-46 25	8.2	7.5	B9	6	..	13038b	63	2432	35.4	- 19 1	9.8	10.6	G5	1	..	24583b
14	1717	35.1	-54 38	7.3	9.1	K5	2	..	40275b	64	7253	35.4	- 24 13	8.0	8.6	Fo	5	..	18994b
15	979	35.1	-65 12	9.8	10.4	Go	2	..	21452b	65	5754	35.4	- 27 11	8.8	8.5	A2	6	..	18994b
16	980	35.1	-65 37	10.1	10.9	G5	1	..	21452b	66	6541	35.4	- 29 23	9.3	9.1	Ao	3	..	18994b
17	537	35.2	+ 68 35	9.4	10.4	Ko	1	..	38602i	67	6614	35.4	- 30 14	8.55	9.0	K5	2	..	13072b
18	2174	35.2	+ 20 18	9.5	9.6	A2	3	..	10654m	68	4508	35.4	- 43 24	9.4	8.4	B9	3	..	13064b
19	2175	35.2	+ 19 56	6.75	6.83	A3	7	..	37617i	69	187	35.5	+ 83 55	9.5	9.6	A3	2	..	38331i
20	2016	35.2	+ 18 38	9.1	9.6	F8	3	..	10654m	70	2140	35.5	+ 39 31	9.1	9.5	F5	1	..	3739oi
21	1903	35.2	+ 16 51	7.6	7.9	Fo	3	..	37617i	71	2178	35.5	+ 20 50	6.60	6.66	A2	..	2.8	56.85
22	2415	35.2	- 4 23	8.6	9.7	K2	1	..	22751b	72	2179	35.5	+ 20 17	8.8	8.9	A3	5	..	10654b
23	2604	35.2	- 15 9	9.36	9.70	F2	3	..	24583b	73	2640	35.5	- 13 12	8.0	8.0	Ao	7	..	19015b
24	2601	35.2	- 18 5	8.8	8.8	B8	6	..	24583b	74	2638	35.5	- 13 30	8.2	9.2	Ko	5	..	19015b
25	2497	35.2	- 19 35	10.4	10.4	F8	2	..	24583b	75	2435	35.5	- 18 15	9.2	9.3	A2	3	..	24583b
26	6354	35.2	- 28 57	8.1	8.2	K2	2	..	13046b	76	2434	35.5	- 19 3	9.8	10.8	Ko	1	..	24583b
27	5294	35.2	- 33 15	7.4	8.4	Ko	6	..	40081b	77	2629	35.5	- 21 2	8.4	9.2	G5	2	..	18302b
28	5293	35.2	- 33 52	10.3	9.9	A2	1	..	40081b	78	7606	35.5	- 23 28	10.1	9.3	Ao	2	..	13144b
29	4471	35.2	- 42 47	9.6	10.0	Ko	1	..	24747b	79	6359	35.5	- 28 43	7.18	7.9	Ko	6	..	18994b
30	4339	35.2	- 45 27	8.2	7.8	A2	3	..	13038b	80	6542	35.5	- 29 45	8.4	9.7	A3	2	..	18994b
31	4338	35.2	- 45 35	8.2	7.5	B8	4	..	13038b	81	4964	35.5	- 37 7	7.10	8.3	K5	4	..	13073b
32	1161	35.2	- 58 7	9.3	9.8	F8	2	..	40088b	82	4631	35.5	- 40 4	7.15	7.9	Oes	5	0.3	13064b
33	1162	35.2	- 58 49	10.1	10.1	A	1	..	40088b	83	4349	35.5	- 41 58	10.8	9.7	Ao	2	..	24747b
34	1012	35.2	- 63 16	8.1	7.9	B3	5	..	13025b	84	4171	35.5	- 47 26	7.8	9.1	K2	1	..	39930b
35	186	35.3	+ 84 16	7.41	7.91	F8	6	..	37546i	85	3702	35.5	- 49 19	9.2	9.0	F2	2	..	39930b
36	2102	35.3	- 1 14	8.4	9.6	K5	1	..	22751b	86	1760	35.5	- 56 26	9.6	9.7	A2	1	..	40088b
37	2606	35.3	- 5 33	9.2	9.2	Ao	4	..	19136b	87	1058	35.5	- 62 30	5.38	7.2	G5	..	..	56.125
38	2683	35.3	- 6 59	8.8	9.2	F5	4	..	19136b	88	1943	35.6	+ 38 26	8.1	8.2	A2	4	..	3739oi
39	2421	35.3	- 11 28	10.7	10.7	A	1	..	19015b	89	1751	35.6	+ 30 21	8.9	9.9	Ko	2	..	38637i
40	2420	35.3	- 12 7	5.15	6.22	K2	6	R	8827b	90	2078	35.6	+ 19 37	8.6	8.7	A3	4	..	37617i
41	2623	35.3	- 12 54	9.4	9.7	Fo	1	..	19015b	91	2103	35.6	- 2 7	8.92	9.99	K2	1	..	22751b
42	2607	35.3	- 14 52	9.6	9.6	Ao	4	..	24583b	92	2432	35.6	- 3 37	8.6	9.6	Ko	4	..	22751b
43	2543	35.3	- 15 26	10.0	10.8	G5	1	..	24583b	93	2572	35.6	- 8 0	9.8	10.1	F2	1	..	19136b
44	2541	35.3	- 16 56	7.04	8.39	Mb	9	..	24583b	94	2595	35.6	- 10 36	8.8	9.2	F5	2	..	19015b
45	4345	35.3	- 41 47	9.5	10.0	G5	2	..	24747b	95	2544	35.6	- 15 33	9.8	9.9	A3	2	..	24583b
46	4343	35.3	- 41 56	9.5	9.7	A2	3	..	24747b	96	2604	35.6	- 17 53	9.0	9.3	Fo	4	..	24583b
47	4400	35.3	- 46 26	8.5	7.6	B9	4	..	13038b	97	7256	35.6	- 24 23	7.8	7.9	Ao	7	..	18994b
48	4168	35.3	- 47 32	10.9	9.3	A3	1	..	39930b	98	6544	35.6	- 29 12	5.04	7.1	G5	9	5.2	8889b
49	3447	35.3	- 50 9	8.72	8.1	B5	4	..	39930b	99	5300	35.6	- 33 22	10.1	10.2	A3	1	..	40081b
50	3448	35.3	- 50 47	9.4	8.9	Ao	2	..	40275b	100	4872	35.6	- 36 15	6.06	6.7	Fo	5	2.4	42221b

## THE HENRY DRAPER CATALOGUE.

73900

8<sup>h</sup> 35<sup>m</sup>.6

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	4633	35.6	-39 26	7.09	7.6	A2	3	..	42246b	51	3132	35.9	-51 49	8.9	8.7	Ao	3	..	40275b
2	4353	35.6	-41 23	10.1	9.7	Go	3	..	24747b	52	1565	35.9	-52 44	6.48	6.46	B9	5	..	4985b
3	4348	35.6	-45 53	9.4	8.8	B8	2	..	39930b	53	1060	35.9	-62 10	8.9	8.9	B8	2	..	13025b
4	1789	35.6	-53 22	7.2	7.6	Ao	7	..	40275b	54	1811	36.0	+29 2	8.9	9.0	A2	3	..	38637i
5	1722	35.6	-54 23	8.4	9.4	Ko	1	..	40275b	55	2107	36.0	-1 38	8.6	9.4	G5	4	..	22751b
6	887	35.6	-66 54	9.3	9.8	F8	6	..	21452b	56	2654	36.0	-2 14	9.2	10.2	Ko	1	..	22751b
7	2652	35.7	-2 22	9.1	9.4	Fo	2	..	22751b	57	2436	36.0	-3 49	9.1	9.1	B9	4	..	22751b
8	2608	35.7	-5 20	9.4	9.5	A2	3	..	19136b	58	2619	36.0	-9 13	9.1	10.1	Ko	1	..	19136b
9	2685	35.7	-6 21	8.6	9.6	Ko	4	..	19136b	59	2626	36.0	-12 15	9.4	10.4	Ko	1	..	19015b
10	2573	35.7	-7 27	8.4	9.5	K2	4	..	19136b	60	2438	36.0	-18 50	8.5	9.1	Go	5	..	24583b
11	2447	35.7	-8 21	9.4	9.5	A2	3	..	19136b	61	2439	36.0	-18 52	10.0	10.6	G	1	..	24583b
12	2611	35.7	-14 21	8.2	8.3	A2	10	..	19015b	62	2635	36.0	-20 39	7.82	9.2	K2	3	..	18302b
13	2610	35.7	-14 56	8.6	8.9	Fo	6	..	24583b	63	5766	36.0	-28 3	8.4	8.0	Ao	8	..	18994b
14	2605	35.7	-17 29	9.6	10.1	F8	2	R	24583b	64	5125	36.0	-34 51	9.7	10.4	K2	1	..	40081b
15	2631	35.7	-20 25	9.2	9.5	F5	3	..	24583b	65	4641	36.0	-39 53	8.6	8.6	B9	3	0,3	13064b
16	2351	35.7	-22 36	9.4	9.8	K	1	..	18302b	66	3133	36.0	-51 13	9.2	9.2	Ao	2	..	40275b
17	2350	35.7	-22 51	8.2	9.2	Ko	3	..	13144b	67	1566	36.0	-52 15	9.4	9.8	F5	1	..	40275b
18	6623	35.7	-30 9	9.8	9.0	B9	1	..	13072b	68	1793	36.0	-53 10	7.2	9.1	Ma	2	..	40275b
19	4351	35.7	-45 53	9.2	8.2	B	4	R	39930b	69	964	36.0	-67 23	10.1	10.2	A3	3	..	21452b
20	4174	35.7	-48 4	10.5	9.6	Ko	1	..	39930b	70	813	36.0	-68 58	9.9	10.0	A2	3	..	21452b
21	3453	35.7	-50 55	7.3	8.6	G5	4	..	40275b	71	1606	36.1	+47 16	6.21	6.99	G5	8	..	38625i
22	1742	35.8	+33 45	8.5	9.3	G5	2	..	38634i	72	1846	36.1	+43 13	9.0	9.6	Go	2	..	38639i
23	1966	35.8	+13 35	8.9	9.7	G5	2	..	37628i	73	1976	36.1	+24 9	8.1	9.1	Ko	3	..	38635i
24	2042	35.8	-0 9	9.18	9.96	G5	1	..	22751b	74	2185	36.1	+20 14	6.98	7.98	Ko	5	..	37617i
25	2434	35.8	-3 52	8.6	8.9	F2	5	..	22751b	75	2150	36.1	+1 20	7.8	8.9	K2	3	..	37654i
26	2574	35.8	-7 36	9.2	10.2	Ko	2	..	19136b	76	2621	36.1	-10 5	7.86	8.86	Ko	3	..	19015b
27	2613	35.8	-14 55	10.0	10.1	A5	2	..	24583b	77	2607	36.1	-17 57	9.2	9.5	F2	3	..	24583b
28	2546	35.8	-16 16	9.8	9.8	A	1	..	24583b	78	2637	36.1	-20 56	8.6	9.2	F8	3	..	18302b
29	2632	35.8	-20 17	8.23	9.2	Ko	5	..	24583b	79	6413	36.1	-25 53	10.8	9.7	F8	2	R	18994b
30	4638	35.8	-39 26	9.3	9.1	F5	2	..	13073b	80	6413	36.1	-25 53	10.8	9.7	F8	2	R	18994b
31	292	35.9	+78 12	8.7	9.3	Go	2	..	37493i	81	6316	36.1	-26 38	10.3	9.5	Ao	2	..	18994b
32	1758	35.9	+49 40	8.4	9.5	K2	1	..	38625i	82	6394	36.1	-31 55	8.2	9.3	Ko	1	..	13046b
33	1675	35.9	+48 34	7.6	8.2	Go	5	..	38625i	83	5307	36.1	-33 11	8.9	10.1	K2	2	..	40081b
34	1893	35.9	+36 52	8.2	8.6	F5	2	..	37390i	84	5308	36.1	-33 40	7.37	7.9	A3	10	..	40081b
35	1864	35.9	+31 16	9.5	9.9	F5	1	..	38637i	85	4491	36.1	-40 56	8.3	9.1	K2	2	..	13064b
36	2182	35.9	+20 1	8.9	9.9	Ko	2	..	10654m	86	4487	36.1	-42 8	8.4	8.3	B9	7	0,4	13064b
37	2080	35.9	+19 30	8.9	9.0	A5	2	..	10654m	87	4522	36.1	-43 49	9.4	9.4	F5	2	..	13064b
38	1894	35.9	+11 25	7.40	7.40	Ao	7	..	37628i	88	1165	36.1	-58 32	9.0	10.3	G5	1	..	40088b
39	2450	35.9	-8 56	9.4	10.2	G5	2	..	19136b	89	814	36.1	-68 53	9.5	10.7	K5	1	..	21452b
40	2426	35.9	-11 33	7.8	8.6	G5	6	..	19015b	90	796	36.1	-70 19	7.02	7.1	B9	9	..	24527b
41	2425	35.9	-11 49	7.8	7.9	A2	8	..	19015b	91	470	36.2	+71 19	7.8	8.9	K2	2	..	38602i
42	2548	35.9	-16 12	10.3	10.6	F	1	..	24583b	92	2141	36.2	+39 25	7.62	8.97	Ma	2	..	37390i
43	2547	35.9	-17 6	9.6	10.4	G5	1	..	24583b	93	2186	36.2	+20 32	9.2	9.5	Fo	3	..	37617i
44	2436	35.9	-18 56	9.2	9.2	Ao	6	..	24583b	94	2082	36.2	+19 17	9.8	10.1	F2	2	..	10654m
45	2437	35.9	-19 5	8.6	9.5	Ko	5	..	24583b	95	2032	36.2	+2 58	7.8	8.8	Ko	3	..	37654i
46	6313	35.9	-26 25	9.4	9.1	G5	1	..	18994b	96	2686	36.2	-6 29	8.7	9.9	K5	2	..	19136b
47	5305	35.9	-33 39	7.28	8.1	K2	8	..	40081b	97	2452	36.2	-8 42	6.48	6.48	Ao	5	..	2469b
48	5122	35.9	-34 35	8.9	9.5	F8	3	..	40081b	98	2628	36.2	-12 48	9.4	9.5	A2	1	..	19015b
49	5123	35.9	-34 50	10.1	9.7	F5	2	..	40081b	99	2547	36.2	-15 42	9.2	9.6	F5	4	..	24583b
50	3130	35.9	-51 21	9.6	9.3	A3	2	..	40275b	100	2546	36.2	-15 58	9.4	9.8	F5	3	..	24583b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

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8<sup>h</sup> 36<sup>m</sup>.2

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	2609	36.2	-17 47	9.2	9.2	Ao	6	..	24583b	51	2551	36.5	-15 51	9.2	10.2	Ko	2	..	24583b
2	2440	36.2	-18 13	9.2	10.0	G5	3	..	24583b	52	2442	36.5	-18 39	10.0	10.3	F2	3	..	24583b
3	5769	36.2	-27 32	9.0	9.1	G5	2	..	18994b	53	6387	36.5	-28 11	9.0	9.1	Fo	3	..	18994b
4	6632	36.2	-30 12	9.60	9.1	Ao	1	..	13072b	54	6386	36.5	-28 31	8.1	9.1	Ko	4	..	18994b
5	6398	36.2	-31 48	8.8	8.1	Ao	5	..	13046b	55	3996	36.5	-48 15	10.9	9.3	B9	2	..	3993ob
6	5128	36.2	-34 57	4.04	4.82	G5	..	0,8R	28,202	56	1574	36.5	-52 56	9.1	9.2	A2	2	..	40275b
7	4645	36.2	-39 24	8.6	9.1	Ko	1	..	13073b	57	1779	36.6	+32 13	7.04	7.54	F8	7	..	38634i
8	4359	36.2	-41 45	9.5	9.7	G5	2	..	24747b	58	2191	36.6	+20 32	9.5	9.8	Fo	2	..	10654m
9	1569	36.2	-52 21	8.6	9.0	F2	3	..	40275b	59	2043	36.6	+1 54	8.4	9.2	G5	2	..	37654b
10	1759	36.3	+49 15	6.88	7.16	Fo	7	..	38625i	60	2606	36.6	-10 44	10.0	10.0	Ao	2	..	19015b
11	1885	36.3	+34 34	7.37	7.87	F8	5	0,4	38634i	61	2616	36.6	-14 19	9.8	10.1	Fo	3	..	24583b
12	1967	36.3	+13 25	9.1	10.1	K	1	..	37628i	62	2443	36.6	-18 10	10.3	10.8	F8	1	..	24583b
13	2423	36.3	-4 13	9.0	10.0	Ko	1	..	22751b	63	2500	36.6	-19 33	7.61	8.0	A3	9	..	24583b
14	2421	36.3	-4 27	7.8	8.8	Ko	5	..	22751b	64	7627	36.6	-24 3	9.0	8.6	Ao	4	..	18994b
15	2687	36.3	-6 10	8.7	8.8	A2	6	..	19136b	65	7279	36.6	-24 16	8.6	8.2	A2	6	..	18994b
16	2454	36.3	-8 30	8.4	9.8	Ma	3	..	19136b	66	6390	36.6	-28 22	10.3	9.7	A3	2	..	18994b
17	2601	36.3	-10 48	9.4	10.6	K5	1	..	19015b	67	4653	36.6	-39 54	5.17	5.15	B9	..	0,8-	56,125
18	2644	36.3	-13 56	8.0	8.4	F5	7	3,7	24583b	68	4662	36.6	-44 26	9.8	8.7	Ao	2	..	13064b
19	2614	36.3	-14 48	8.6	9.6	Ko	3	..	24583b	69	4661	36.6	-44 47	9.8	9.3	A	1	..	13064b
20	2549	36.3	-15 58	9.6	9.7	A5	3	..	24583b	70	3998	36.6	-48 56	8.2	9.5	Ko	2	..	3993ob
21	2550	36.3	-16 59	8.0	8.0	Ao	8	..	24583b	71	1796	36.6	-53 5	5.60	5.48	B5	..	4,8	28,202
22	2639	36.3	-20 28	8.02	9.2	Ko	3	..	18302b	72	427	36.7	+72 46	7.54	7.88	F2	5	..	37714i
23	7271	36.3	-24 56	10.1	10.1	A	1	..	18994b	73	2143	36.7	+39 10	7.8	8.2	F5	5	..	37390i
24	6320	36.3	-26 54	7.9	8.2	A2	7	..	18994b	74	1886	36.7	+33 58	9.5	9.5	Ao	2	..	38634i
25	6562	36.3	-29 21	9.6	9.0	A3	2	..	18994b	75	1780	36.7	+32 5	9.2	9.7	F8	2	..	38634i
26	5310	36.3	-33 42	9.3	9.6	F8	2	..	40081b	76	1817	36.7	+29 45	9.16	9.58	F5	2	..	38637i
27	4360	36.3	-41 38	9.3	9.4	Ao	4	0,1	24747b	77	2657	36.7	-2 24	9.4	10.0	G	1	..	22751b
28	2083	36.4	+19 46	7.90	7.98	A3	4	..	37617i	78	2690	36.7	-6 15	9.1	10.2	K2	4	..	19136b
29	2110	36.4	-1 10	8.8	9.3	F8	2	..	22751b	79	2444	36.7	-18 45	9.4	10.4	Ko	3	..	24583b
30	2603	36.4	-10 42	9.8	10.1	F	1	..	19015b	80	2503	36.7	-19 42	9.6	10.1	A3	2	..	24583b
31	2615	36.4	-14 30	9.0	10.1	K2	3	..	24583b	81	7630	36.7	-24 1	8.8	9.8	Ko	1	..	18994b
32	2551	36.4	-16 11	9.6	10.7	K2	1	..	24583b	82	6393	36.7	-28 36	11.0	9.4	A2	2	..	18994b
33	2610	36.4	-17 40	9.8	10.6	G5	2	..	24583b	83	6392	36.7	-29 2	9.1	8.8	B9	1	..	13046b
34	2499	36.4	-19 11	9.8	9.8	B9	3	..	24583b	84	4367	36.7	-41 23	8.6	9.7	K2	2	..	24747b
35	7625	36.4	-23 45	9.0	9.6	K	1	..	18302b	85	4368	36.7	-41 46	10.3	9.7	Ao	2	..	24747b
36	6322	36.4	-27 1	8.4	9.1	Ko	3	..	18994b	86	4665	36.7	-44 21	8.4	8.4	Ko	4	..	13064b
37	5134	36.4	-34 42	9.2	9.5	F5	1	..	40081b	87	1730	36.7	-55 1	9.4	9.4	Ao	1	..	40275b
38	5135	36.4	-34 46	9.7	9.7	Ao	1	..	40081b	88	1063	36.7	-62 29	6.58	9.5	K5	4	..	13025b
39	4650	36.4	-39 43	8.6	8.3	Ao	5	0,4	13073b	89	1332	36.8	+52 48	8.6	9.6	Ko	1	..	38625i
40	4497	36.4	-40 45	8.0	8.2	Ao	5	..	13064b	90	1969	36.8	+13 44	9.1	9.9	G5	2	..	37628i
41	4363	36.4	-41 35	9.9	9.7	Ao	3	..	24747b	91	1968	36.8	+12 58	10.1	10.7	G	1	..	37628i
42	4659	36.4	-44 24	9.6	8.4	Ao	4	..	13064b	92	1854	36.8	+10 48	8.9	9.7	G5	2	..	37628i
43	4374	36.4	-46 1	7.8	8.7	K5	2	..	3993ob	93	2609	36.8	-5 15	7.95	9.30	Ma	4	..	19136b
44	3135	36.4	-51 58	8.3	8.0	A3	5	..	40275b	94	2632	36.8	-12 26	9.0	9.1	A2	4	..	19015b
45	1660	36.4	-55 35	7.1	7.9	F5	2	..	42241b	95	..	36.8	-15 56	..	..	A2	1	..	24583b
46	719	36.4	-71 18	8.1	9.1	Ko	3	..	24527b	96	2445	36.8	-18 49	9.2	10.3	K2	3	..	24583b
47	268	36.5	+80 22	8.4	8.7	Fo	4	..	37493b	97	2446	36.8	-19 5	8.0	8.6	F5	7	..	24583b
48	1144	36.5	+57 55	8.6	8.9	Fo	3	..	37705i	98	7284	36.8	-24 38	9.6	9.1	A5	4	..	18994b
49	1778	36.5	+32 43	8.8	9.8	Ko	2	..	38634i	99	6432	36.8	-25 24	9.4	9.2	Go	1	..	18994b
50	2084	36.5	+19 17	8.00	8.14	A5	4	..	37617i	100	5782	36.8	-27 37	8.0	8.2	A5	7	..	18994b

## THE HENRY DRAPER CATALOGUE.

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8h 36m.8

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	6396	36.8	-28 42	8.1	9.4	K	1	..	18994b	51	1781	37.2	+43 52	8.5	9.0	F8	1	..	38639i
2	6408	36.8	-31 27	8.0	8.8	K <sub>2</sub>	2	..	13046b	52	1898	37.2	+37 5	7.04	8.04	Ko	5	..	37390i
3	4930	36.8	-35 43	8.9	8.3	Ao	5	..	40081b	53	1863	37.2	+36 43	7.73	8.73	Ko	3	..	37390i
4	4370	36.8	-41 59	7.5	8.2	Go	6	..	24747b	54	1746	37.2	+33 5	8.1	9.2	K <sub>2</sub>	3	..	38634i
5	4371	36.8	-42 2	7.1	7.3	A <sub>2</sub>	7	0,8	19156b	55	1802	37.2	+16 49	7.8	7.8	Ao	3	..	37617i
6	4380	36.8	-45 15	8.8	8.2	B <sub>9</sub>	2	..	13038b	56	2035	37.2	+ 4 57	7.68	8.24	Go	5	..	37654i
7	4194	36.8	-47 23	10.2	8.7	Ao	3	..	39930b	57	2659	37.2	- 2 41	7.50	8.85	Ma	5	..	22751b
8	1731	36.8	-54 17	9.5	9.5	Ao	1	..	40275b	58	2429	37.2	-12 8	9.4	9.5	A <sub>2</sub>	3	..	19015b
9	137	36.8	-86 28	9.4	9.7	F	2	..	15145b	59	2651	37.2	-13 33	9.1	10.2	K <sub>2</sub>	3	..	19016b
10	286	36.9	+79 20	var.	var.	Mb	..	R	M	60	2556	37.2	-16 54	9.4	9.8	F <sub>5</sub>	2	..	24583b
11	1970	36.9	+12 59	9.8	10.8	K	1	..	37628i	61	2614	37.2	-17 58	8.5	8.5	B <sub>9</sub>	7	..	24583b
12	1855	36.9	+10 45	9.8	10.1	F	1	..	37628i	62	2548	37.2	-21 49	7.80	8.0	Ao	7	..	18302b
13	2044	36.9	- 0 47	8.4	8.5	A <sub>5</sub>	3	..	37654i	63	6346	37.2	-26 35	10.5	9.5	Ao	2	..	18994b
14	2648	36.9	-13 23	9.1	10.2	K <sub>2</sub>	1	..	19016b	64	5601	37.2	-32 14	8.7	9.0	A <sub>3</sub>	4	..	40081b
15	4505	36.9	-40 43	7.9	7.9	B <sub>9</sub>	5	..	13064b	65	4508	37.2	-40 19	9.5	9.4	Ko	1	..	24747b
16	4004	36.9	-48 59	10.0	9.0	B	2	R	39930b	66	4380	37.2	-41 58	7.3	8.8	K <sub>5</sub>	3	3,3	19156b
17	1578	36.9	-52 36	8.8	9.2	F <sub>2</sub>	2	..	40275b	67	4679	37.2	-44 50	5.74	7.4	K <sub>5</sub>	..	0,6	56,125
18	815	36.9	-68 57	9.6	10.8	K <sub>5</sub>	1	..	21452b	68	3141	37.2	-51 35	7.4	7.3	B <sub>8</sub>	8	..	40275b
19	1847	37.0	+43 4	7.64	7.92	Fo	6	..	37390i	69	1581	37.2	-52 54	7.3	7.2	Ao	2	1,7	4985b
20	1959	37.0	+14 20	8.8	9.2	F <sub>5</sub>	2	..	37628i	70	1160	37.2	-60 23	9.0	9.2	Ao	2	0,2	40088b
21	2425	37.0	- 4 20	8.7	9.7	Ko	2	..	22751b	71	969	37.2	-67 47	9.4	10.0	Go	3	..	21452b
22	2581	37.0	- 7 54	8.6	9.8	K <sub>5</sub>	3	..	19136b	72	2695	37.3	- 6 41	9.2	10.2	Ko	1	..	19136b
23	2456	37.0	- 8 12	7.68	7.74	A <sub>2</sub>	8	..	19136b	73	2582	37.3	- 7 45	8.7	9.9	K <sub>5</sub>	1	..	19136b
24	2555	37.0	-16 17	9.2	9.5	Fo	2	..	24583b	74	5791	37.3	-27 47	9.0	9.2	F <sub>5</sub>	2	..	18994b
25	2613	37.0	-18 7	10.7	10.7	Ao	1	..	24583b	75	5602	37.3	-32 53	7.9	8.7	Ko	5	..	40081b
26	6341	37.0	-27 5	8.0	9.2	K <sub>2</sub>	3	..	18994b	76	5327	37.3	-34 5	10.3	9.8	Fo	1	..	40081b
27	6398	37.0	-28 33	9.1	8.5	Fo	5	..	18994b	77	5147	37.3	-34 8	10.8	10.1	Ao	1	..	40081b
28	4934	37.0	-35 18	9.3	9.7	F <sub>2</sub>	1	..	40081b	78	4735	37.3	-38 53	8.6	8.5	B <sub>9</sub>	3	..	13064b
29	4389	37.0	-45 46	9.2	9.0	A	3	E	13064b	79	4503	37.3	-42 38	9.4	9.2	Ao	2	..	13064b
30	4008	37.0	-48 5	7.8	9.0	Ko	3	..	39930b	80	4438	37.3	-46 18	4.06	4.48	F <sub>5</sub> p	..	3,8 R	28,202
31	1167	37.0	-58 30	9.1	9.2	A <sub>2</sub>	3	..	40088b	81	3142	37.3	-51 11	9.4	9.8	K <sub>5</sub>	1	..	40275b
32	1624	37.1	+45 50	8.1	8.5	F <sub>5</sub>	5	..	38625i	82	1804	37.3	-53 29	7.6	7.1	A <sub>3</sub>	2	..	4985b
33	1780	37.1	+44 25	8.8	9.6	G <sub>5</sub>	1	..	38639i	83	943	37.3	-69 18	8.3	9.4	K <sub>2</sub>	2	..	24527b
34	1893	37.1	+21 35	9.9	10.9	Ko	2	..	10654m	84	801	37.3	-70 15	10.0	10.0	A	2	..	21452b
35	1894	37.1	+21 11	9.6	9.9	Fo	3	..	10654m	85	1868	37.4	+31 41	8.6	9.8	K <sub>5</sub>	1	..	38634i
36	2649	37.1	-13 27	9.0	10.1	K <sub>2</sub>	2	..	19016b	86	2088	37.4	+19 27	9.30	9.86	Go	2	..	10654m
37	2554	37.1	-15 35	4.98	5.98	Ko	..	..	56,85	87	2017	37.4	+ 5 55	8.8	9.4	G	1	..	37654i
38	2556	37.1	-15 49	10.0	10.1	A <sub>2</sub>	3	..	24583b	88	2583	37.4	- 8 2	8.8	9.2	F <sub>5</sub>	4	..	19136b
39	2505	37.1	-19 38	8.4	9.2	Ko	4	..	24583b	89	2459	37.4	- 8 13	7.8	8.8	Ko	5	..	19136b
40	7635	37.1	-23 55	8.4	9.2	A <sub>2</sub>	3	..	18994b	90	2432	37.4	-11 36	6.30	6.36	A <sub>2</sub>	10	..	19016b
41	6593	37.1	-29 7	9.4	10.2	K <sub>5</sub>	1	..	18994b	91	2652	37.4	-13 28	9.6	10.1	F <sub>8</sub>	2	..	19016b
42	6592	37.1	-29 44	8.4	8.7	B <sub>9</sub>	2	..	13046b	92	4943	37.4	-35 57	7.9	8.3	F <sub>2</sub>	4	..	40081b
43	4378	37.1	-41 47	9.5	9.7	A <sub>3</sub>	3	..	24747b	93	4513	37.4	-41 5	9.5	9.2	Ao	2	..	13064b
44	4500	37.1	-43 0	10.5	9.7	Ao	2	..	24747b	94	4683	37.4	-44 42	7.9	7.8	B <sub>2</sub>	3	..	13038b
45	1580	37.1	-52 21	8.6	8.9	A <sub>5</sub>	5	..	40275b	95	1583	37.4	-52 34	3.68	3.51	B <sub>3</sub>	..	5, R	28,202
46	1579	37.1	-52 42	5.38	5.26	B <sub>5</sub>	..	3,8	28,202	96	1584	37.4	-52 39	5.73	5.9	B <sub>5</sub>	..	..	56,125
47	1168	37.1	-58 31	9.1	9.5	A	2	..	40088b	97	970	37.4	-67 13	9.4	9.8	F <sub>5</sub>	3	..	21452b
48	1075	37.1	-59 58	6.40	6.7	Ao	5	..	42241b	98	1895	37.5	+21 50	4.73	4.73	Ao	..	0, R	56,85
49	968	37.1	-67 39	9.4	10.6	K <sub>5</sub>	3	..	21452b	99	1896	37.5	+20 59	8.9	10.3	Mb	4	0,1	8253m
50	1328	37.2	+55 54	9.2	9.8	G	2	..	37705i	100	2022	37.5	+18 31	7.88	8.88	Ko	4	..	10654m



## ANNALS OF HARVARD COLLEGE OBSERVATORY.

74200

8<sup>h</sup> 37<sup>m</sup>.5

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
		m.	° ' "									m.	° ' "						
1	2653	37.5	-13 10	8.5	8.6	A3	3	..	19016b	51	4214	37.8	-47 42	7.9	7.5	B5	5	..	13038b
2	2559	37.5	-17 4	7.5	7.9	F5	6	..	24583b	52	4215	37.8	-48 0	10.0	8.8	A0	2	..	39930b
3	2552	37.5	-21 39	7.6	9.2	K5	4	..	18302b	53	4018	37.8	-48 21	10.5	9.5	A0	1	..	39930b
4	2361	37.5	-22 51	9.4	9.3	A0	1	..	13144b	54	3478	37.8	-50 41	8.2	8.6	G5	7	..	40275b
5	6448	37.5	-25 19	8.8	9.2	F5	2	..	18994b	55	3476	37.8	-50 46	11.5	9.3	A2	1	..	40275b
6	5796	37.5	-27 43	10.5	9.2	A0	3	..	18994b	56	1781	37.8	-56 25	8.9	9.2	Go	2	2,1	40088b
7	5610	37.5	-33 0	9.3	9.3	B9	2	..	40081b	57	973	37.8	-67 48	9.0	9.1	A3	3	..	24527b
8	4948	37.5	-35 36	8.6	7.7	F2	7	..	40081b	58	1146	37.9	+58 35	7.9	8.3	F5	4	..	37705i
9	4684	37.5	-44 23	9.6	8.7	A0	3	..	13064b	59	2097	37.9	+40 14	8.5	9.6	K2	1	..	37390i
10	4395	37.5	-45 24	8.2	8.7	K2	3	..	13064b	60	1658	37.9	+27 36	8.04	9.11	K2	2	..	38173i
11	3472	37.5	-50 16	9.8	9.2	A0	1	..	39930b	61	2035	37.9	+8 54	8.4	8.8	F5	2	..	37628i
12	1808	37.5	-53 5	8.3	9.4	K0	1	..	40275b	62	2666	37.9	-2 19	8.5	8.9	F5	6	..	22751b
13	1809	37.5	-53 47	8.9	9.4	F8	1	..	40275b	63	2428	37.9	-4 11	9.4	9.4	A0	1	..	22751b
14	1919	37.6	+42 28	7.05	8.12	K2	5	..	37390i	64	2625	37.9	-14 26	9.6	10.6	K0	2	..	24583b
15	2444	37.6	-3 36	9.0	9.4	F5	2	..	22751b	65	5805	37.9	-27 45	9.6	8.9	A0	4	..	18994b
16	2445	37.6	-4 3	6.97	8.04	K2	5	..	22751b	66	6416	37.9	-28 19	9.3	9.7	K0	1	..	18994b
17	2587	37.6	-8 7	6.95	6.93	B9	9	..	19226b	67	6620	37.9	-29 13	9.1	9.9	K5	1	..	18994b
18	2636	37.6	-12 56	8.1	9.3	K5	3	..	19016b	68	5618	37.9	-32 29	9.9	10.2	K2	1	..	40081b
19	2616	37.6	-17 9	9.8	9.8	A0	2	..	24583b	69	5334	37.9	-33 46	10.6	10.2	A0	1	..	40081b
20	2615	37.6	-17 30	10.3	10.4	A2	1	..	24583b	70	4955	37.9	-35 23	10.1	9.7	A2	2	..	40081b
21	5611	37.6	-32 58	9.2	9.0	F5	2	..	40081b	71	4519	37.9	-40 52	8.3	9.2	K5	1	..	13064b
22	5153	37.6	-34 20	9.9	9.8	A3	3	..	40081b	72	4448	37.9	-46 57	4.85	5.2	A3	..	2,7 R	28,202
23	4510	37.6	-42 46	9.4	9.4	A2	2	..	13064b	73	4020	37.9	-48 34	6.14	5.8	B5	4	..	8888b
24	3474	37.6	-50 39	7.3	8.7	K5	3	..	40275b	74	3732	37.9	-49 39	9.1	9.0	A0	3	..	39930b
25	293	37.7	+78 33	7.30	8.65	Mb	6	..	37714i	75	1587	37.9	-52 26	7.9	7.3	A0	3	..	4985b
26	1864	37.7	+35 24	8.7	9.5	G5	2	E	37390i	76	1813	37.9	-53 45	8.8	8.5	B9	4	..	40275b
27	1962	37.7	+14 29	8.14	8.92	G5	4	..	37628i	77	1066	37.9	-62 10	8.4	9.5	K2	2	..	13025b
28	1972	37.7	+13 3	5.67	5.75	A3	10	R	37628i	78	2025	38.0	+18 30	8.8	8.9	A5	3	..	10654m
29		37.7	+13 3			G				79	2040	38.0	+5 38	8.4	9.2	G5	1	..	37654i
30	2611	37.7	-10 39	8.4	8.5	A2	5	..	19016b	80	2039	38.0	+3 46	4.32	4.15	B3	..	R	1770c
31	2557	37.7	-15 40	9.1	9.2	A2	5	..	24583b	81	2038	38.0	+3 20	9.1	9.4	F	1	..	37654i
32	6454	37.7	-25 45	10.3	9.7	A0	2	..	18994b	82	2588	38.0	-7 29	9.1	10.1	K0	1	..	19136b
33	5801	37.7	-27 50	9.1	8.6	A2	5	..	18994b	83	2612	38.0	-11 3	9.4	10.4	K0	1	..	19016b
34	4210	37.7	-47 52	7.3	7.0	B5	8	..	13038b	84	2627	38.0	-15 1	9.4	9.4	B8	5	..	24583b
35	1638	37.7	-58 2	8.8	9.4	G5	2	..	40088b	85	2558	38.0	-15 37	8.5	9.5	K0	4	..	24583b
36	1078	37.7	-59 11	6.7	6.5	B9	4	..	42241b	86	2555	38.0	-22 8	9.1	9.3	Go	2	5,1	18302b
37	1015	37.7	-63 11	9.5	9.9	F5	2	..	40095b	87	5622	38.0	-32 15	9.2	9.6	K2	2	..	40081b
38	925	37.7	-64 37	8.7	8.7	A0	5	..	21452b	88	4956	38.0	-35 10	9.5	9.7	G5	1	..	40081b
39	987	37.7	-65 51	9.5	9.9	F5	4	..	21452b	89	4517	38.0	-42 14	9.0	8.8	Go	4	2,3	24747b
40	234	37.7	-84 1	8.9	9.0	A3	5	..	22238b	90	4217	38.0	-47 13	8.5	8.7	B8	4	..	39930b
41	428	37.8	+72 18	8.8	9.2	F5	1	..	38602i	91	1642	38.0	-58 1	8.5	9.7	K0	1	..	40088b
42	658	37.8	+65 49	8.6	9.4	G5	4	E	37517i	92	1782	38.1	+32 26	6.92	6.98	A2	7	0,7	38634i
43	1899	37.8	+37 17	6.34	6.68	F2	7	..	37390i	93	2465	38.1	-8 10	8.6	9.7	K2	2	..	19136b
44	2427	37.8	-4 15	8.8	9.8	K0	1	..	22751b	94	2630	38.1	-9 26	6.82	6.88	A2	4	0,9	2469b
45	2700	37.8	-7 7	8.6	9.7	K2	3	..	19136b	95	2559	38.1	-15 22	9.2	9.8	Go	1	..	24583b
46	2623	37.8	-14 20	9.6	10.6	K0	2	..	24583b	96	2560	38.1	-17 3	9.4	10.0	Go	1	..	24583b
47	2365	37.8	-22 30	9.6	9.5	A0	1	..	13144b	97	2451	38.1	-19 3	9.8	10.2	F5	2	..	24583b
48	5803	37.8	-27 54	9.8	9.7	A	1	..	18994b	98	2557	38.1	-22 1	7.6	7.8	A5	6	..	18302b
49	4445	37.8	-46 15	10.5	9.4	A0	2	..	39930b	99	6432	38.1	-31 23	8.4	9.0	K0	3	..	40081b
50	4213	37.8	-47 6	9.6	8.7	A2	4	..	39930b	100	6433	38.1	-31 52	7.07	7.5	B9	10	..	40081b

THE HENRY DRAPER CATALOGUE.

74300

8<sup>h</sup> 38<sup>m</sup>.1

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	4957	38.1	-35 21	10.3	9.7	Ao	1	..	40081b	51	6425	38.4	-28 24	9.4	8.8	Ao	4	..	18994b
2	4549	38.1	-43 19	9.2	9.0	A3	2	..	13064b	52	6443	38.4	-31 59	10.8	10.1	A3	1	..	40081b
3	4220	38.1	-47 41	9.2	8.8	A2	2	..	39930b	53	5339	38.4	-33 59	10.8	10.4	A	1	..	40081b
4	1745	38.1	-54 11	8.7	8.9	F5	4	..	40275b	54	4681	38.4	-39 44	9.3	8.9	Ao	4	..	24747b
5	528	38.1	-76 39	7.8	9.0	K5	3	..	24452b	55	4528	38.4	-40 20	8.6	7.9	B8	4	..	13064b
6	364	38.1	-78 51	9.1	10.2	K2	3	3,2	21453b	56	4404	38.4	-41 28	8.9	8.8	Ao	4	0,3	13064b
7	2090	38.2	+19 24	var.	var.	Ao	7	R	10654m	57	4403	38.4	-42 3	9.3	8.5	Ao	4	0,3	13064b
8	1859	38.2	+10 2	8.24	8.30	A2	3	..	37628i	58	429	38.5	+72 24	7.8	8.8	Ko	1	..	38602i
9	2702	38.2	-7 0	9.4	10.4	Ko	1	..	19136b	59	1015	38.5	+62 38	8.2	9.3	K2	1	..	38603i
10	2629	38.2	-14 37	8.5	9.3	G5	5	..	24583b	60	1431	38.5	+46 33	8.2	8.6	F5	4	..	38625i
11	2561	38.2	-16 3	9.2	9.3	A2	4	..	24583b	61	1784	38.5	+44 2	7.22	7.64	F5	6	..	37390i
12	2621	38.2	-17 10	9.8	9.9	A5	2	..	24583b	62	1805	38.5	+16 18	8.5	8.5	Ao	2	..	37617i
13	2558	38.2	-21 13	8.4	8.9	A2	4	..	18302b	63	1861	38.5	+10 39	8.6	9.6	Ko	2	..	37628i
14	7663	38.2	-23 51	7.8	9.2	Ko	3	..	18994b	64	2705	38.5	-6 42	8.7	9.7	Ko	2	..	19136b
15	6682	38.2	-30 12	9.30	9.0	Ao	2	..	13046b	65	2630	38.5	-14 38	8.8	8.8	Ao	6	..	24583b
16	4929	38.2	-36 49	8.3	8.9	K2	2	..	13055b	66	2562	38.5	-16 50	8.6	8.9	Fo	5	..	24583b
17	5013	38.2	-37 24	8.6	8.7	A2	3	..	13055b	67	7665	38.5	-24 5	8.0	8.0	Ao	7	..	18994b
18	4551	38.2	-43 53	9.1	9.3	G5	2	..	13064b	68	6465	38.5	-25 31	7.5	8.2	A2	7	..	18994b
19	4698	38.2	-44 38	7.3	7.0	B9	2	..	8888b	69	6429	38.5	-28 14	9.0	9.1	F5	3	..	18994b
20	3486	38.2	-50 17	9.6	9.3	A5	1	..	39930b	70	4525	38.5	-42 14	9.0	8.3	Ao	5	1,7	19156b
21	1817	38.2	-53 25	9.4	9.4	Ao	2	..	40275b	71	4704	38.5	-45 3	5.23	5.2	B5	..	3,5	28,202
22	1674	38.2	-55 48	7.7	7.5	A3	1	..	42241b	72	1593	38.5	-52 14	9.0	10.1	K2	1	..	40275b
23	1643	38.2	-58 3	9.9	9.9	A	1	..	40088b	73	1595	38.5	-52 56	9.8	9.8	Ao	1	..	40275b
24	975	38.2	-67 29	9.1	9.2	A2	2	..	24527b	74	1819	38.5	-53 16	9.1	9.4	F8	1	..	40275b
25	816	38.2	-68 6	9.6	9.7	A3	4	..	21452b	75	1080	38.5	-59 24	4.42	4.23	B2	..	R	28,202
26	1169	38.3	+57 48	7.7	7.7	Ao	6	..	37705i	76	989	38.5	-65 42	9.2	10.4	K5	1	..	21452b
27	1783	38.3	+44 33	8.5	9.0	F8	2	..	38639i	77	1922	38.6	+42 4	8.2	9.2	Ko	3	..	37390i
28	1963	38.3	+13 58	8.6	9.4	G5	2	..	37628i	78	1902	38.6	+36 55	8.2	8.3	A2	3	..	37390i
29	1899	38.3	+11 38	8.4	8.5	A3	4	..	37628i	79	1899	38.6	+21 15	8.7	9.7	Ko	4	..	10654m
30	2038	38.3	+9 42	7.34	8.34	Ko	4	..	37628i	80	1964	38.6	+14 8	8.4	9.2	G5	2	..	37628i
31	2155	38.3	+1 8	8.4	8.7	F2	3	..	37654i	81	2452	38.6	-3 23	9.0	10.0	Ko	1	..	22751b
32	2703	38.3	-6 49	9.2	9.8	Go	2	..	19136b	82	2622	38.6	-17 19	10.3	10.9	Go	2	..	24583b
33	2437	38.3	-12 3	7.8	8.2	F5	6	..	19016b	83	5344	38.6	-33 18	9.7	9.7	Ao	1	..	40081b
34	6462	38.3	-25 57	8.4	9.7	K5	1	..	18994b	84	4683	38.6	-39 26	8.4	8.2	B9	5	..	13055b
35	5630	38.3	-32 6	9.0	9.0	Ao	5	..	40081b	85	4528	38.6	-42 34	8.4	8.6	Ko	3	2,3	13064b
36	4962	38.3	-35 28	10.1	10.1	G5	1	..	40081b	86	4235	38.6	-47 24	9.4	8.7	Fo	3	..	39930b
37	4960	38.3	-35 38	10.1	9.7	Ao	2	..	40081b	87	1597	38.6	-52 38	8.8	9.8	Ko	1	..	40275b
38	4222	38.3	-47 37	10.0	9.4	Ao	1	..	39930b	88	818	38.6	-68 55	7.1	7.1	B8	9	..	24527b
39	4224	38.3	-47 40	9.4	8.8	B8	2	..	39930b	89	1766	38.7	+49 14	7.37	7.37	Ao	7	..	38625i
40	1592	38.3	-52 32	9.0	9.8	G5	1	..	40275b	90	1924	38.7	+42 47	8.0	9.0	Ko	3	..	37390i
41	1644	38.3	-57 11	6.44	6.8	A2	5	..	42241b	91	2199	38.7	+20 20	10.1	11.1	Ko	1	..	10654m
42	1162	38.3	-61 1	9.7	9.8	A2	1	..	40095b	92	1863	38.7	+10 47	9.1	10.1	K	1	..	37628i
43	327	38.3	-79 48	7.06	8.7	K5	4	..	20869b	93	2029	38.7	+4 42	6.33	6.28	B8	9	..	37654i
44	434	38.4	+73 3	8.5	9.1	Go	3	2,2	38187i	94	2707	38.7	-6 51	8.8	8.8	Ao	5	..	19136b
45	2100	38.4	+40 44	8.8	9.8	Ko	1	..	37390i	95	2708	38.7	-6 52	4.70	5.26	Go	..	R	56,85
46	1950	38.4	+38 4	8.6	9.7	K2	2	..	37390i	96	2563	38.7	-16 32	10.0	10.8	G5	1	..	24583b
47	1900	38.4	+37 27	8.1	9.1	Ko	1	..	37390i	97	6645	38.7	-29 25	9.6	9.1	Ao	4	..	18994b
48	1640	38.4	+28 50	8.5	9.1	Go	1	..	38173i	98	5168	38.7	-34 10	9.5	10.1	Ko	1	..	40081b
49	2052	38.4	-0 42	8.2	9.0	G5	2	..	22751b	99	4533	38.7	-40 12	9.5	9.2	A2	3	..	13064b
50	2651	38.4	-20 20	9.18	9.2	Ao	4	E	24583b	100	4534	38.7	-40 28	9.2	9.2	A5	3	..	13064b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

74400

8<sup>h</sup> 38<sup>m</sup>.7

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	4241	38.7	-47 18	9.1	8.8	B	2	R	3993ob	51	6451	39.0	-31 14	7.9	9.0	Ko	4	..	40081b
2	4239	38.7	-47 30	11.5	9.0	B <sub>9</sub>	2	..	3993ob	52	4944	39.0	-36 9	8.9	8.3	G <sub>5</sub>	3	..	40081b
3	3741	38.7	-49 58	9.6	9.5	Fo	1	..	3993ob	53	4569	39.0	-43 13	9.8	9.1	A <sub>5</sub>	2	..	13064b
4	1648	38.7	-57 7	8.7	8.6	F8	3	..	41151b	54	4474	39.0	-46 13	8.3	8.1	B <sub>9</sub>	4	..	13038b
5	946	38.7	-70 1	5.26	5.26	Ao	6	0,3 R	5899b	55	4251	39.0	-47 44	5.48	5.4	B <sub>3</sub>	..	0,5	28,202
6	1806	38.8	+16 17	8.4	8.5	A <sub>2</sub>	2	..	37617i	56	4034	39.0	-48 5	9.8	9.2	B <sub>9</sub>	2	..	3993ob
7	2043	38.8	+ 5 15	8.8	8.9	A <sub>3</sub>	2	..	37654i	57	3496	39.0	-50 27	9.1	9.3	K <sub>2</sub>	1	..	40275b
8	2616	38.8	- 5 40	8.4	9.4	Ko	4	..	19226b	58	1175	39.0	-58 26	9.4	9.5	A <sub>2</sub>	2	..	40088b
9	2661	38.8	-13 40	7.6	7.6	Ao	8	..	19016b	59	1164	39.0	-60 55	9.9	9.9	Ao	1	..	40095b
10	2565	38.8	-15 16	9.20	10.20	Ko	3	..	24583b	60	724	39.0	-71 59	8.2	8.5	F <sub>2</sub>	4	..	24527b
11	2623	38.8	-17 33	9.2	9.3	A <sub>2</sub>	3	..	24583b	61	530	39.0	-74 13	6.71	7.2	A <sub>5</sub>	7	0,10	24452b
12	2510	38.8	-19 44	9.1	9.2	Ao	4	..	24583b	62	559	39.1	+67 49	8.5	9.5	Ko	1	..	38602i
13	2562	38.8	-21 39	8.4	9.2	K <sub>2</sub>	2	..	13144b	63	1785	39.1	+44 2	8.0	9.0	Ko	2	..	38639i
14	5347	38.8	-33 41	10.8	10.2	A <sub>2</sub>	1	..	40081b	64	1760	39.1	+30 1	8.7	9.5	G <sub>5</sub>	1	..	3863oi
15	5169	38.8	-34 19	9.3	9.5	G <sub>5</sub>	2	..	40081b	65	1983	39.1	+22 14	8.8	9.8	Ko	3	..	10654m
16	5170	38.8	-34 22	7.9	9.5	Ma	2	..	40081b	66	2092	39.1	+19 47	9.18	9.96	G <sub>5</sub>	2	..	10654m
17	4939	38.8	-37 1	7.9	8.0	K <sub>2</sub>	3	..	13055b	67	1886	39.1	+15 17	8.4	8.8	F <sub>5</sub>	3	..	37628i
18	4774	38.8	-39 2	8.6	8.6	B <sub>9</sub>	4	..	13055b	68	2110	39.1	+ 8 27	8.8	8.8	Ao	3	..	37628i
19	4536	38.8	-40 41	10.3	9.4	A	1	..	13064b	69	2454	39.1	- 3 51	7.8	7.9	A <sub>2</sub>	8	..	22751b
20	1753	38.8	-54 37	9.5	9.5	B <sub>9</sub>	1	..	40275b	70	2567	39.1	-15 46	10.0	11.2	K <sub>5</sub>	1	..	24583b
21	1059	38.8	-61 20	8.1	8.6	A <sub>3</sub>	4	..	13025b	71	2568	39.1	-15 54	10.0	11.2	K <sub>5</sub>	1	..	24583b
22	1072	38.8	-62 49	8.2	8.3	A <sub>2</sub>	4	..	13025b	72	2565	39.1	-16 13	9.2	10.4	K <sub>5</sub>	2	..	24583b
23	927	38.8	-64 29	8.6	8.6	Ao	4	..	21452b	73	2626	39.1	-17 18	9.8	10.6	G <sub>5</sub>	3	..	24583b
24	725	38.8	-72 7	9.0	10.0	K	1	..	24527b	74	6436	39.1	-28 19	7.9	8.9	Ko	4	..	18994b
25	575	38.9	+66 35	7.7	8.2	F8	5	0,5	38603i	75	4976	39.1	-35 35	6.36	6.7	Ao	6	0,5-	42246b
26	2644	38.9	-12 40	9.4	9.5	A <sub>2</sub>	3	..	19016b	76	3747	39.1	-49 39	9.2	9.2	A <sub>3</sub>	2	..	3993ob
27	2564	38.9	-16 53	9.2	10.4	K <sub>5</sub>	2	..	24583b	77	1758	39.1	-54 25	9.0	8.9	G <sub>5</sub>	4	..	40275b
28	2511	38.9	-19 13	9.4	10.1	Ko	2	..	24583b	78	1759	39.1	-54 36	9.4	9.4	B <sub>9</sub>	2	..	40275b
29	6646	38.9	-29 9	7.5	8.1	Ao	7	..	18994b	79	928	39.1	-64 26	9.8	9.9	A <sub>2</sub>	2	..	21452b
30	6703	38.9	-30 23	9.8	9.4	A	1	..	13046b	80	977	39.1	-67 10	8.6	8.6	B <sub>9</sub>	5	..	24527b
31	5637	38.9	-32 18	10.8	10.1	F8	1	..	40081b	81	819	39.1	-68 6	9.9	10.2	F <sub>2</sub>	2	..	21452b
32	5171	38.9	-34 46	9.9	10.1	A <sub>3</sub>	1	..	40081b	82	531	39.1	-74 42	8.2	8.3	A <sub>2</sub>	3	..	24452b
33	4974	38.9	-35 55	10.3	9.5	Ao	3	..	40081b	83	1903	39.2	+37 39	6.91	7.19	Fo	6	..	3739oi
34	4777	38.9	-38 56	9.2	9.4	Ao	2	..	13055b	84	1754	39.2	+33 37	7.96	9.03	K <sub>2</sub>	3	..	38634i
35	4566	38.9	-43 18	8.2	8.4	Ko	2	5,2	13064b	85	1876	39.2	+31 4	6.14	7.14	Ko	8	0,8	3863oi
36	4246	38.9	-47 53	8.3	7.6	B8	4	0,4	13038b	86	2046	39.2	+ 5 38	7.8	7.8	Ao	7	..	37654i
37	3494	38.9	-50 10	9.58	9.3	A <sub>2</sub>	1	..	40275b	87	2372	39.2	- 0 4	8.58	8.58	Ao	3	..	37654i
38	1598	38.9	-52 42	7.9	7.8	A <sub>3</sub>	6	..	40275b	88	2619	39.2	-10 12	9.01	8.99	B <sub>9</sub>	3	..	19016b
39	517	38.9	-75 48	8.9	9.9	Ko	3	5,2	21453b	89	2441	39.2	-12 7	9.6	10.6	Ko	1	..	19016b
40	1953	39.0	+38 43	8.3	9.3	Ko	2	..	3739oi	90	2631	39.2	-14 43	8.6	9.6	Ko	5	..	24583b
41	2202	39.0	+20 16	10.1	11.3	K <sub>5</sub>	1	..	10654b	91	2569	39.2	-15 36	8.0	9.0	Ko	5	..	24583b
42	2027	39.0	+18 31	4.17	5.17	Ko	..	0, R	56,85	92	2566	39.2	-16 39	8.0	8.5	F8	6	..	24583b
43	1974	39.0	+13 5	9.3	10.3	K	1	..	37628i	93	2629	39.2	-17 41	9.8	10.2	F <sub>5</sub>	3	..	24583b
44	2041	39.0	+ 3 27	8.4	9.4	Ko	2	..	37654i	94	7324	39.2	-24 10	9.0	8.6	Ao	4	..	18994b
45	2119	39.0	- 1 53	8.6	9.4	G <sub>5</sub>	2	..	22751b	95	5832	39.2	-27 26	8.8	8.2	B8	7	..	18994b
46	2619	39.0	- 6 9	8.0	9.0	Ko	6	..	19226b	96	4258	39.2	-47 9	7.4	7.1	A <sub>2</sub>	2	..	8888b
47	2624	39.0	-17 18	10.3	11.3	Ko	2	..	24583b	97	1599	39.2	-52 23	8.0	8.4	G <sub>5</sub>	5	..	40275b
48	2655	39.0	-20 45	8.8	9.8	Ko	3	0,1	24583b	98	1084	39.2	-59 28	9.0	9.6	Go	2	..	40088b
49	5827	39.0	-27 13	9.6	9.4	A <sub>5</sub>	1	..	18994b	99	995	39.2	-65 19	9.6	9.6	Ao	3	..	21452b
50	6649	39.0	-29 50	9.8	9.7	Ao	2	..	18994b	100	820	39.2	-68 57	9.4	9.5	A <sub>3</sub>	4	..	21452b

## THE HENRY DRAPER CATALOGUE.

74500

8<sup>h</sup> 39<sup>m</sup>.3

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	329	39.3	+75 51	9.5	10.1	G	3	..	37714i	51	2444	39.5	-12 5	9.0	9.1	A2	3	..	19016b
2	1281	39.3	+53 26	9.2	9.2	A	1	..	38625i	52	2568	39.5	-17 1	9.2	10.4	K5	1	..	24583b
3	1451	39.3	+51 42	8.8	9.2	F5.	3	..	38625i	53	6384	39.5	-26 17	8.0	8.5	A3	6	..	18994b
4	1573	39.3	+50 24	8.6	8.9	Fo	2	..	38625i	54	6448	39.5	-28 37	9.3	8.8	Ao	3	..	18994b
5	2435	39.3	-4 44	8.6	8.6	Ao	5	..	22751b	55	4788	39.5	-38 20	9.3	8.6	Ao	4	..	13055b
6	2471	39.3	-9 2	9.0	9.0	Ao	2	..	19136b	56	4786	39.5	-38 46	7.9	7.9	F5	7	..	13055b
7	2650	39.3	-12 30	9.4	9.5	A2	1	..	19016b	57	4571	39.5	-43 36	9.0	8.5	A3	5	1,3	13064b
8	2458	39.3	-18 54	9.8	10.8	Ko	3	R	24583b	58	4483	39.5	-46 27	7.5	7.2	A3	1	..	8888b
9	7327	39.3	-24 56	9.45	9.2	F8	1	..	18994b	59	4268	39.5	-47 43	10.5	9.0	B8	2	..	39930b
10	6456	39.3	-31 43	9.6	10.2	Ao	1	..	40081b	60	1607	39.5	-52 45	5.04	4.92	B5	..	3,9	28,202
11	5354	39.3	-33 42	8.6	10.1	Mb	2	..	40081b	61	1826	39.5	-53 32	8.8	9.1	F2	2	..	40275b
12	5177	39.3	-34 31	10.8	10.1	A	1	..	40081b	62	1023	39.5	-63 58	7.8	7.8	Ao	9	..	21452b
13	4696	39.3	-39 26	9.5	9.1	F8	2	..	13055b	63	1000	39.5	-65 44	9.4	10.6	K5	2	..	21452b
14	4538	39.3	-40 47	9.3	9.4	K5	1	..	13064b	64	1001	39.5	-66 3	9.5	9.8	Fo	4	..	21452b
15	4479	39.3	-46 7	9.2	9.6	Ko	2	..	39930b	65	949	39.5	-69 18	9.3	10.3	Ko	3	..	21452b
16	1601	39.3	-52 36	8.0	7.3	Ao	7	..	40275b	66	138	39.5	-86 14	6.96	6.8	Ao	5	0,7-	11010b
17	1600	39.3	-52 48	8.6	8.6	Ao	4	..	40275b	67	1889	39.6	+15 41	7.8	8.6	G5	3	..	37617i
18	532	39.3	-74 33	9.4	9.5	A3	2	..	22237b	68	2057	39.6	+2 4	8.0	9.0	Ko	2	..	37654i
19	1954	39.4	+38 5	9.9	10.0	A3	3	..	37390i	69	2373	39.6	+0 42	8.94	9.50	G	2	..	37654i
20	1820	39.4	+29 38	8.7	9.5	G5	2	5,1	38637i	70	2374	39.6	+0 5	8.4	8.4	A	1	..	37654i
21	1864	39.4	+10 27	5.58	5.58	Aop	..	0,R	56,85	71	2569	39.6	-16 35	9.2	10.2	Ko	3	..	24583b
22	2047	39.4	+4 56	8.51	8.51	Ao	2	..	37654i	72	2631	39.6	-17 20	9.6	10.7	K2	1	..	24583b
23	2622	39.4	-10 45	9.0	9.5	F8	2	..	19016b	73	2514	39.6	-19 17	9.4	9.8	A3	2	..	24583b
24	2654	39.4	-12 40	9.4	10.4	Ko	1	..	19016b	74	5838	39.6	-27 24	9.3	9.4	Ao	2	..	18994b
25	2570	39.4	-15 37	9.8	10.8	Ko	2	..	24583b	75	5651	39.6	-32 50	3.70	3.51	B2	..	R	28,202
26	7329	39.4	-24 21	8.4	8.5	Fo	5	..	18994b	76	4789	39.6	-38 32	6.63	7.3	Ko	4	..	42246b
27	7328	39.4	-24 43	9.6	9.2	F8	1	..	18994b	77	4421	39.6	-41 30	9.3	8.9	Ao	3	..	19156b
28	4435	39.4	-45 11	8.79	8.4	B8	4	..	13064b	78	4550	39.6	-42 57	8.8	8.5	A2	5	0,3	13064b
29	4482	39.4	-46 53	9.0	8.8	G5	3	..	39930b	79	4437	39.6	-45 6	8.19	8.7	K2	2	..	13064b
30	4263	39.4	-47 42	9.1	7.8	B8	3	..	39930b	80	4271	39.6	-47 46	9.2	8.1	B8	4	..	39930b
31	4261	39.4	-47 48	7.5	7.2	B9	8	..	39930b	81	4269	39.6	-47 51	9.2	7.5	B9	3	..	39930b
32	4040	39.4	-48 57	10.2	9.5	Ao	1	..	39930b	82	1608	39.6	-52 10	9.2	9.6	F5	2	..	40275b
33	3750	39.4	-49 24	9.1	9.3	A2	2	..	39930b	83	1086	39.6	-59 29	8.5	9.5	Ko	3	0,2	40088b
34	3160	39.4	-51 29	8.5	9.3	G5	3	..	40275b	84	929	39.6	-64 14	8.8	10.2	Ma	3	..	21452b
35	1605	39.4	-52 44	5.68	6.4	B9	..	0,7	28,202	85	435	39.7	+73 35	9.7	10.0	F2	2	..	38187i
36	1603	39.4	-53 0	7.9	7.3	B8	5	..	40275b	86	2104	39.7	+39 53	9.12	9.18	A2	2	..	37390i
37	1825	39.4	-53 47	8.2	8.5	A2	4	..	40275b	87	2206	39.7	+20 45	9.1	9.2	A5	5	..	10654m
38	1177	39.4	-58 43	8.9	9.5	A5	1	..	41151b	88	2205	39.7	+20 12	10.1	10.6	F8	2	..	10654m
39	998	39.4	-65 50	10.1	10.2	A3	3	..	21452b	89	2094	39.7	+19 14	8.25	8.53	Fo	2	..	37617i
40	978	39.4	-67 15	9.7	9.8	A3	4	..	21452b	90	1891	39.7	+15 23	7.6	8.1	F8	5	..	37628i
41	979	39.4	-67 27	8.6	9.8	K5	2	..	24527b	91	2030	39.7	+6 3	6.00	6.06	A2	9	..	37654i
42	725	39.4	-71 46	8.6	8.6	Ao	3	..	24527b	92	2595	39.7	-8 5	8.7	9.0	Fo	3	..	19136b
43	523	39.4	-73 43	6.87	8.0	Ko	6	..	24527b	93	7692	39.7	-23 13	9.3	8.9	B9	3	..	13144b
44	238	39.4	-83 44	8.1	8.2	A5	6	..	22238b	94	6452	39.7	-28 39	8.6	9.1	Ko	2	..	18994b
45	1866	39.5	+36 14	9.1	10.1	Ko	1	..	38634i	95	6722	39.7	-30 18	9.1	8.7	A2	3	..	40081b
46	1642	39.5	+28 48	7.24	7.58	F2	5	..	38173i	96	6465	39.7	-31 6	10.3	9.6	Ao	2	..	40081b
47	1902	39.5	+21 22	10.1	10.6	F8	2	..	10654m	97	5363	39.7	-33 50	10.3	9.7	A5	2	..	40081b
48	2030	39.5	+18 42	9.1	9.4	F2	3	..	10654m	98	5186	39.7	-34 13	9.0	10.0	Ko	2	..	40081b
49	2122	39.5	-2 2	9.17	9.67	F8	2	..	22751b	99	4441	39.7	-45 12	6.89	7.8	Ko	4	..	39930b
50	2620	39.5	-5 51	8.4	9.5	K2	2	..	19226b	100	4443	39.7	-45 26	8.3	9.1	Ma	1	..	39930b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

74600

8<sup>h</sup> 39<sup>m</sup>.7

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	4442	39.7	-45 51	8.5	8.4	Ko	4	..	3993ob	51	4280	40.0	-47 44	9.4	9.0	F5	3	..	3993ob
2	4486	39.7	-46 39	9.6	8.7	B9	3	..	3993ob	52	1617	40.0	-52 9	8.4	9.3	K2	2	..	40275b
3	366	39.7	-78 8	8.8	9.1	F2	2	2,2-	22237b	53	379	40.1	+74 8	7.74	8.74	Ko	3	..	37714i
4	560	39.8	+67 5	6.15	6.10	B8	8	0,9	38603i	54	2152	40.1	+38 51	8.7	9.3	Go	3	..	37390i
5	1894	39.8	+33 57	7.16	8.23	K2	5	..	38634i	55	2207	40.1	+20 24	8.1	8.6	F8	5	..	37617i
6	1986	39.8	+21 58	10.1	10.7	Go	2	..	10654m	56	2097	40.1	+19 24	8.05	8.05	Ao	3	..	37617i
7	2095	39.8	+19 11	6.83	7.17	F2	8	0,8 R	37617i	57	2376	40.1	+ 0 4	8.4	9.4	K	1	..	37654i
8	2474	39.8	- 9 5	8.7	8.7	Ao	2	E	19015b	58	2441	40.1	- 4 24	9.0	9.3	Fo	3	..	19226b
9	2656	39.8	-12 17	9.0	9.1	A3	3	..	19016b	59	2517	40.1	-19 15	9.6	9.8	A2	3	..	24583b
10	2658	39.8	-12 38	9.4	10.4	K	1	..	19016b	60	5660	40.1	-32 54	8.9	9.6	Go	3	..	40081b
11	2657	39.8	-12 50	9.2	9.2	B9	3	..	19016b	61	4962	40.1	-36 11	9.5	9.2	A2	3	..	40081b
12	2515	39.8	-19 54	7.49	8.4	Ko	8	..	24583b	62	4283	40.1	-47 59	9.6	8.2	B8	4	..	3993ob
13	6390	39.8	-26 37	9.0	9.9	K	1	..	18994b	63	4053	40.1	-48 21	9.0	9.5	K2	1	..	3993ob
14	6723	39.8	-30 42	8.4	10.1	Ma	1	..	40081b	64	1619	40.1	-53 3	10.0	10.0	Ao	1	..	40275b
15	5365	39.8	-33 5	8.7	8.7	A3	5	..	40081b	65	1834	40.1	-53 23	8.0	7.9	A3	7	..	40275b
16	4795	39.8	-38 44	8.9	8.9	A3	5	..	13055b	66	1766	40.1	-54 52	9.0	9.5	F8	1	..	40275b
17	4709	39.8	-39 14	7.5	8.6	K5	2	..	13055b	67	1004	40.1	-65 54	9.2	10.4	K5	2	..	21452b
18	4488	39.8	-46 44	9.4	9.0	G5	2	..	3993ob	68	809	40.1	-70 57	8.5	8.6	A3	3	..	24527b
19	4275	39.8	-47 16	8.5	8.7	Ko	3	..	3993ob	69	1645	40.2	+27 57	7.39	8.39	Ko	3	..	38173i
20	4276	39.8	-47 19	9.4	8.4	B9	3	..	3993ob	70	1983	40.2	+25 44	7.9	8.0	A2	3	..	38173i
21	4277	39.8	-47 49	9.2	8.4	B8	4	..	3993ob	71	2376	40.2	-22 43	9.6	9.5	A3	1	..	13144b
22	1688	39.8	-55 25	6.14	7.5	Ko	4	..	42241b	72	6463	40.2	-28 9	9.3	9.4	A2	2	..	18994b
23	530	39.8	-76 23	7.7	8.7	Ko	3	..	24452b	73	5047	40.2	-37 40	9.0	9.2	Fo	3	..	13055b
24	1644	39.9	+28 43	8.3	8.9	Go	2	..	38173i	74	4804	40.2	-38 25	6.90	7.9	Ko	3	..	42246b
25	2674	39.9	- 2 37	8.4	9.4	Ko	3	..	22751b	75	4554	40.2	-40 6	8.95	8.8	Ao	3	..	13055b
26	2440	39.9	- 4 44	9.4	9.5	A5	2	..	19226b	76	4555	40.2	-40 53	9.9	8.9	B9	3	1,2	13064b
27	2632	39.9	-17 39	8.6	9.7	K2	6	..	24583b	77	4455	40.2	-45 44	9.4	8.4	B5	3	..	40296b
28	2462	39.9	-18 43	8.8	9.8	Ko	4	..	24583b	78	1622	40.2	-52 43	7.9	8.0	A2	7	..	40275b
29	2516	39.9	-19 21	9.4	9.5	A3	4	..	24583b	79	1693	40.2	-55 59	8.8	8.9	Fo	2	..	41151b
30	2569	39.9	-21 17	8.0	9.2	Ko	3	..	13144b	80	1816	40.2	-56 50	8.7	8.8	Fo	2	..	41151b
31	7342	39.9	-24 36	9.6	9.1	Ao	3	..	18994b	81	1088	40.2	-59 10	8.7	7.5	Ao	2	..	42241b
32	6672	39.9	-29 52	8.0	8.5	Fo	6	..	18994b	82	728	40.2	-71 56	7.8	8.8	Ko	4	..	24527b
33	5189	39.9	-34 16	8.4	9.2	Ao	5	..	40081b	83	421	40.2	-77 15	9.4	10.4	Ko	3	..	21453b
34	4426	39.9	-41 10	9.9	9.2	Ao	1	..	19156b	84	1663	40.3	+27 3	8.3	8.8	F8	2	..	38630i
35	4428	39.9	-41 25	9.3	9.4	Ao	1	..	19156b	85	2049	40.3	+ 5 1	6.51	7.51	Ko	7	..	37654i
36	3164	39.9	-51 18	8.5	8.9	Ao	4	..	40275b	86	2379	40.3	+ 0 35	6.85	7.63	G5	6	..	37654i
37	1003	39.9	-65 25	9.4	10.2	G5	2	..	21452b	87	2380	40.3	+ 0 9	8.4	8.7	F	2	..	37654i
38	899	39.9	-66 27	6.86	6.6	B8	8	..	24527b	88	2676	40.3	- 2 14	6.17	6.59	F5	8	..	37654i
39	823	39.9	-68 15	9.8	10.8	K	1	..	21452b	89	2574	40.3	-15 40	9.2	10.2	Ko	3	..	24583b
40	350	40.0	+75 29	8.72	9.50	G5	3	..	37714i	90	7702	40.3	-23 25	6.79	8.4	Ko	7	..	13144b
41	2034	40.0	+ 4 34	8.6	8.6	Ao	2	..	37654i	91	6395	40.3	-26 9	9.6	9.4	K5	1	..	18994b
42	2713	40.0	- 6 10	9.2	10.2	Ko	2	..	19226b	92	6740	40.3	-31 4	8.4	9.4	F2	3	..	40081b
43	2597	40.0	- 7 54	7.5	7.9	F5	7	..	19136b	93	4581	40.3	-43 7	9.6	9.0	A2	2	..	13064b
44	2570	40.0	-21 20	8.8	8.9	B9	4	..	13144b	94	4740	40.3	-44 46	9.1	9.3	K2	1	..	13064b
45	5851	40.0	-27 49	8.2	9.1	Go	2	..	18994b	95	4496	40.3	-46 34	10.9	9.1	B9	2	..	3993ob
46	5849	40.0	-27 57	8.8	9.2	F8	2	..	18994b	96	3510	40.3	-50 44	10.0	9.3	A	1	..	40275b
47	5370	40.0	-33 5	8.6	8.7	A2	6	..	40081b	97	1656	40.3	-57 13	9.1	9.5	K2	1	..	41151b
48	4432	40.0	-41 16	9.0	8.6	A3	1	..	19156b	98	729	40.3	-71 31	7.5	8.3	G5	6	..	24527b
49	4449	40.0	-45 57	9.1	8.7	Ao	4	0,4	40296b	99	1254	40.4	+54 46	8.36	8.36	Ao	4	..	37705i
50	4282	40.0	-47 26	7.6	7.5	B9	7	..	13038b	100	1958	40.4	+38 24	7.48	8.66	K5	4	..	37390i

THE HENRY DRAPER CATALOGUE.

74700

8<sup>h</sup> 40<sup>m</sup>.4

JOHN G. WOLBACH LIBRARY  
HARVARD COLLEGE OBSERVATORY  
CAMBRIDGE, MASS., 02138

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	2462	m. 40.4	° 3 19	8.5	8.5	Ao	5	..	22751b	51	5001	m. 40.6	° -35 42	9.3	9.2	Ao	4	..	40081b
2	2714	40.4	- 6 37	6.97	7.97	Ko	7	..	19226b	52	4748	40.6	-44 16	9.1	8.7	Ko	2	0,2	13064b
3	2659	40.4	-13 3	8.4	9.8	Ma	3	..	19016b	53	3761	40.6	-49 27	5.19	5.00	B2	..	1,8 R	56,125
4	2637	40.4	-15 4	7.86	8.28	F5	8	..	24583b	54	984	40.6	-67 11	9.8	9.8	B9	5	..	21452b
5	2575	40.4	-15 47	10.0	10.3	F2	2	..	24583b	55	1787	40.7	+43 51	9.2	10.0	G5	1	..	38639i
6	2667	40.4	-20 48	6.13	6.5	A2	9	..	41219b	56	2668	40.7	-13 45	8.6	8.9	Fo	2	..	19016b
7	2666	40.4	-21 7	9.4	9.6	B9	1	..	13144b	57	2518	40.7	-19 18	9.4	9.6	G5	3	..	24583b
8	2573	40.4	-21 56	7.8	9.2	K5	3	..	13144b	58	2380	40.7	-23 0	8.7	9.2	Ao	2	..	13144b
9	6471	40.4	-28 45	8.4	9.4	Ma	3	..	18994b	59	6516	40.7	-26 1	8.0	8.2	A2	7	..	18994b
10	6475	40.4	-31 39	7.53	9.0	K2	5	..	40081b	60	4439	40.7	-41 11	8.6	8.8	Fo	3	0,2	13064b
11	4504	40.4	-46 26	7.5	7.4	B3	5	..	13038b	61	4438	40.7	-41 34	9.3	9.1	Ao	2	..	19156b
12	4498	40.4	-47 3	var.	var.	K2	1	R	39930b	62	1842	40.7	-53 9	7.6	7.3	A2	8	..	40275b
13	3167	40.4	-51 51	7.5	8.6	Ko	4	..	40275b	63	267	40.7	-82 15	8.7	9.3	Go	3	..	20869b
14	1625	40.4	-52 14	8.6	9.2	F5	2	..	40275b	64	1989	40.8	+22 0	8.6	9.6	Ko	3	..	10654m
15	982	40.4	-67 27	9.0	10.4	Ma	3	..	21452b	65	2519	40.8	-19 51	9.1	9.2	A2	4	..	24583b
16	422	40.4	-77 9	9.1	10.1	Ko	2	..	21453b	66	2671	40.8	-20 23	8.8	9.8	Ko	1	..	41219b
17	798	40.5	+63 43	8.0	8.8	G5	3	E	37517i	67	6404	40.8	-26 18	9.8	9.5	K2	1	..	18994b
18	2209	40.5	+20 3	8.6	8.7	A5	3	..	37617i	68	5864	40.8	-27 42	9.6	9.2	Ao	2	..	18994b
19	2100	40.5	+19 37	9.3	9.3	Ao	2	..	10654m	69	6695	40.8	-29 14	9.3	9.1	Ao	3	..	18994b
20	2034	40.5	+18 32	8.2	8.3	A2	3	..	37617i	70	5004	40.8	-35 48	8.1	8.3	Fo	5	..	40081b
21	1981	40.5	+13 37	8.6	8.6	B9	3	..	37628i	71	5063	40.8	-37 36	8.3	9.2	Ko	3	..	13055b
22	2032	40.5	+ 6 3	9.3	9.3	A	1	..	37654i	72	4569	40.8	-42 17	4.12	6.1	G5	..	0,7 R	28,202
23	2061	40.5	- 0 20	8.58	9.36	G5	1	..	37654i	73	4512	40.8	-46 45	7.8	7.2	B5	7	..	13038b
24	2603	40.5	- 7 51	9.4	9.7	Fo	2	..	19226b	74	3518	40.8	-50 17	7.38	7.8	F5	2	..	4985b
25	2577	40.5	-15 37	9.2	9.6	F5	3	..	24583b	75	272	40.9	+81 7	9.7	9.7	A	2	..	37493i
26	2578	40.5	-15 42	9.2	10.0	G5	3	..	24583b	76	272	40.9	+80 24	7.47	7.47	Ao	6	0,6	37493i
27	2668	40.5	-20 18	8.73	9.5	K2	2	..	41219b	77	1574	40.9	+50 39	8.4	9.0	Go	2	..	38625i
28	6513	40.5	-25 11	9.3	9.4	Ko	1	..	18994b	78	1871	40.9	+40 53	8.3	9.3	Ko	2	..	37390i
29	6470	40.5	-28 22	9.4	9.1	Ao	3	..	18994b	79	2154	40.9	+39 0	9.5	9.6	A5	1	..	37390i
30	4999	40.5	-35 25	9.2	10.4	K5	1	..	40081b	80	2101	40.9	+19 7	8.95	9.09	A5	3	..	10654m
31	5054	40.5	-37 9	6.77	7.2	K2	6	..	13055b	81	2037	40.9	+17 52	7.8	8.2	F5	4	..	37617i
32	4728	40.5	-39 46	9.2	8.5	B9	4	..	13055b	82	2050	40.9	+ 5 38	8.4	9.2	G5	1	..	37654i
33	4505	40.5	-46 8	9.6	9.0	G5	2	..	39930b	83	2717	40.9	- 6 36	8.5	8.9	F5	7	..	19226b
34	3173	40.5	-51 38	8.0	7.8	A2	7	..	40275b	84	2605	40.9	- 7 21	9.2	9.5	Fo	3	..	19226b
35	1089	40.5	-60 3	9.65	9.5	A	2	..	40095b	85	2466	40.9	-18 10	9.2	10.2	Ko	1	..	24583b
36	1959	40.6	+38 37	8.9	10.0	K2	1	..	37390i	86	6698	40.9	-30 4	8.95	9.0	Fo	4	..	18994b
37	1757	40.6	+33 31	9.1	10.2	K2	2	..	38634i	87	6748	40.9	-30 36	7.06	7.4	Ao	4	..	8889b
38	1823	40.6	+29 8	6.61	6.75	A5	7	R	38173i	88	5388	40.9	-33 14	9.0	9.3	G5	2	..	40081b
39	1824	40.6	+29 8	4.20	4.98	G5	..	0,9 R	1651c	89	5010	40.9	-35 20	10.3	9.8	Ao	2	..	40081b
40	1988	40.6	+22 43	7.95	8.01	A2	3	..	37617i	90	4443	40.9	-41 21	7.9	8.5	Ao	5	2,5	19156b
41	1909	40.6	+20 58	6.92	6.98	A2	..	2,7	56,85	91	931	40.9	-64 52	8.6	8.9	F2	5	..	21452b
42	2210	40.6	+20 46	8.3	8.8	F8	4	..	37617i	92	1990	41.0	+22 0	9.5	10.3	G5	2	..	10654m
43	1971	40.6	+14 26	8.09	8.15	A2	4	..	37628i	93	1908	41.0	+10 56	7.5	8.0	F8	5	..	37628i
44	1906	40.6	+11 46	9.5	10.1	Go	2	..	37628i	94	2125	41.0	- 1 41	5.82	6.82	Ko	9	..	37654i
45	1867	40.6	+10 18	7.8	9.0	K5	3	..	37628i	95	2677	41.0	- 2 56	9.1	10.2	K2	1	..	22751b
46	2579	40.6	-16 2	9.4	10.6	K5	1	..	24583b	96	2719	41.0	- 6 10	8.4	9.4	Ko	4	..	19226b
47	2464	40.6	-18 56	9.4	9.7	Fo	3	..	24583b	97	2718	41.0	- 6 22	9.2	9.3	A2	4	..	19226b
48	6514	40.6	-25 22	9.8	9.5	Ao	1	..	18994b	98	2664	41.0	-12 18	9.0	9.5	F8	3	..	19016b
49	6691	40.6	-29 40	8.4	9.6	K2	2	..	18994b	99	2663	41.0	-12 55	8.0	9.0	Ko	5	..	19016b
50	5199	40.6	-34 46	9.2	9.5	Ao	3	..	40081b	100	2578	41.0	-16 34	9.4	9.7	F2	3	..	24583b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

74800

8<sup>h</sup> 41<sup>m</sup>.0

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
		m.	°									m.	°						
1	2577	41.0	-16 48	10.7	10.8	A2	1	..	24583b	51	2452	41.3	-11 10	9.0	10.1	K2	2	..	19016b
2	5872	41.0	-27 52	10.3	9.9	A0	1	..	18994b	52	4453	41.3	-41 56	9.9	9.4	A0	1	..	19156b
3	5065	41.0	-37 38	9.3	8.7	B9	5	..	13055b	53	4311	41.3	-47 37	7.6	8.7	K2	2	..	39930b
4	4569	41.0	-40 55	7.1	7.7	B5	6	0,7	19156b	54	1781	41.3	-54 30	9.6	9.7	A2	1	..	40275b
5	4445	41.0	-41 56	8.6	8.5	A0	3	1,3	19156b	55	259	41.4	+82 12	9.4	10.4	K0	2	..	37493i
6	4446	41.0	-42 4	9.5	8.8	A0	2	0,2	13064b	56	1285	41.4	+53 18	8.4	8.8	F5	2	..	38625i
7	4593	41.0	-43 22	8.8	9.0	G5	1	..	13064b	57	1991	41.4	+21 54	8.8	9.8	K0	3	..	10654m
8	521	41.0	-75 21	8.5	9.5	K0	3	5,3	21453b	58	2625	41.4	-6 3	8.0	9.1	K2	5	..	19226b
9	351	41.1	+75 5	9.32	10.32	K	1	..	37714i	59	2635	41.4	-10 28	7.36	8.71	Mb	6	..	19016b
10	707	41.1	+64 38	7.20	8.20	K0	4	5,4	38603i	60	2634	41.4	-10 39	6.47	7.65	K5	7	..	19016b
11	1647	41.1	+28 32	6.65	7.21	Go	5	..	38173i	61	2670	41.4	-14 1	8.2	8.7	F8	4	..	19016b
12	1667	41.1	+27 6	8.7	8.8	A2	2	..	38173i	62	2582	41.4	-15 43	9.6	10.7	K2	1	..	24583b
13	2213	41.1	+20 40	8.9	9.2	F0	4	..	10654m	63	6535	41.4	-25 14	9.8	9.5	F0	1	..	18994b
14	2212	41.1	+20 10	9.2	10.2	K0	1	..	10654m	64	6533	41.4	-25 49	9.0	9.7	G5	1	..	18994b
15	2047	41.1	+8 50	6.99	6.97	B9	7	..	37628i	65	5399	41.4	-33 29	9.7	9.6	F0	1	..	40081b
16	2383	41.1	+0 7	8.2	9.0	G5	1	..	37654i	66	5072	41.4	-37 35	8.6	9.5	K2	1	..	13055b
17	2127	41.1	-1 29	9.8	10.6	G5	1	..	22751b	67	4455	41.4	-41 9	9.5	8.0	B9	5	0,3	13064b
18	2641	41.1	-17 28	8.6	8.7	A3	7	..	24583b	68	4771	41.4	-44 11	7.0	7.0	Go	1	..	8888b
19	6524	41.1	-25 36	9.0	9.1	A2	3	..	18994b	69	4312	41.4	-47 36	11.5	9.6	B9	1	..	39930b
20	6705	41.1	-29 21	10.3	9.9	A0	1	..	18994b	70	1829	41.4	-56 16	8.2	8.5	A5	4	..	41151b
21	6492	41.1	-31 14	8.8	8.4	B9	7	..	40081b	71	1336	41.5	+56 42	8.2	9.3	K2	3	..	37705i
22	6493	41.1	-31 53	6.79	7.4	F2	9	..	40081b	72	2109	41.5	+39 57	8.22	9.29	K2	2	..	37390i
23	5012	41.1	-35 38	9.9	10.4	K5	1	..	40081b	73	1904	41.5	+12 28	5.71	5.71	A0	10	R	37628i
24	4980	41.1	-36 47	5.76	5.9	B8	..	3,7-	56,125	74	2036	41.5	+6 47	3.48	3.98	F8	..	R	1795c
25	4515	41.1	-46 41	9.6	8.7	A0	3	..	39930b	75	2680	41.5	-2 52	8.4	9.5	K2	2	..	22751b
26	3522	41.1	-50 7	9.42	9.0	A3	2	..	40275b	76	2636	41.5	-11 2	8.4	8.7	F0	5	..	19016b
27	985	41.1	-67 17	10.3	11.3	K	1	..	21452b	77	2583	41.5	-15 56	9.6	9.9	F0	3	..	24583b
28	1929	41.2	+42 5	8.0	8.8	G5	2	..	37390i	78	2579	41.5	-16 56	8.6	9.1	F8	6	..	24583b
29	1825	41.2	+29 28	8.6	9.1	F8	2	..	38630i	79	7377	41.5	-25 1	6.01	5.9	A0	7	0,9	11015b
30	2048	41.2	+9 41	8.87	9.65	G5	2	..	37628i	80	6539	41.5	-25 19	9.4	9.5	F5	1	..	18994b
31	2163	41.2	+1 0	6.93	7.07	A5	7	..	37654i	81	6714	41.5	-29 32	9.6	9.9	A2	2	..	18994b
32	2447	41.2	-4 48	9.2	10.2	K0	1	..	19226b	82	5017	41.5	-35 15	10.8	10.1	A0	1	..	40081b
33	2607	41.2	-7 13	8.0	9.1	K2	4	..	19226b	83	4582	41.5	-41 4	8.9	8.3	B9	4	0,3	13064b
34	2648	41.2	-9 53	7.86	8.86	K0	4	..	19016b	84	4490	41.5	-45 58	var.	var.	G5	3	R	39930b
35	2672	41.2	-21 2	9.2	9.6	A	1	..	13144b	85	4069	41.5	-48 18	8.5	8.7	G5	4	..	39930b
36	2577	41.2	-21 54	8.7	10.4	K	1	..	13144b	86	1706	41.5	-55 24	8.8	8.5	F0	3	..	41151b
37	7370	41.2	-24 31	9.1	8.8	A0	4	..	18994b	87	1171	41.5	-60 21	8.9	9.3	A	2	..	40095b
38	6490	41.2	-28 30	9.8	9.1	F5	2	..	18994b	88	1067	41.5	-61 19	6.97	6.8	B9	4	..	42241b
39	5394	41.2	-33 45	10.1	9.9	A0	1	..	40081b	89	1079	41.5	-62 52	9.2	9.8	Go	2	..	40095b
40	5213	41.2	-34 49	9.9	9.6	A2	2	..	40081b	90	958	41.5	-69 8	9.9	10.0	A2	2	..	21452b
41	4575	41.2	-41 2	9.3	8.9	F8	1	..	19156b	91	423	41.5	-77 15	8.8	9.8	K0	5	5,3	21453b
42	4577	41.2	-42 15	7.6	7.5	G5	5	0,7	19156b	92	2165	41.6	+1 27	8.4	8.5	A2	3	..	37654i
43	4310	41.2	-48 1	8.9	8.4	A2	2	..	13038b	93	2585	41.6	-15 13	9.6	10.6	K0	2	..	24583b
44	1170	41.2	-60 24	8.9	9.5	A	1	..	40095b	94	2470	41.6	-18 48	8.0	8.3	F2	7	..	24583b
45	1008	41.2	-65 31	8.5	8.6	A2	7	..	21452b	95	5886	41.6	-27 29	7.6	8.5	A2	7	..	18994b
46	1771	41.3	+49 20	8.5	9.1	Go	2	..	38625i	96	6500	41.6	-31 7	9.1	9.7	A3	2	..	40081b
47	1910	41.3	+11 19	9.1	10.1	K	1	..	37628i	97	5403	41.6	-33 49	10.1	10.9	K2	1	..	40081b
48	2039	41.3	+4 40	8.15	9.50	Ma	..	..	M	98	5222	41.6	-34 15	8.3	10.0	K0	3	..	40081b
49	2128	41.3	-1 41	9.1	9.1	A0	2	..	22751b	99	5077	41.6	-37 17	8.9	9.2	F0	7	..	13055b
50	2624	41.3	-5 39	9.2	10.2	K0	2	..	19226b	100	4460	41.6	-41 31	7.4	8.2	K2	3	3,2	13064b



## THE HENRY DRAPER CATALOGUE.

74900

8<sup>h</sup> 41<sup>m</sup>.6

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	4530	41.6	-46 57	8.6	9.1	K2	1	..	39930b	51	4466	41.9	-41 8	9.3	9.1	Ao	3	0,2	13064b
2	1191	41.6	-58 22	9.5	9.6	A2	1	..	41151b	52	4502	41.9	-45 33	8.5	7.8	A3	7	..	40296b
3	533	41.6	-76 41	9.1	9.6	F8	3	..	21453b	53	4075	41.9	-48 41	9.2	9.5	Ko	1	..	39930b
4	536	41.7	+70 40	7.38	8.73	Ma	4	..	38602i	54	3780	41.9	-49 47	9.4	9.3	A3	1	..	39930b
5	1078	41.7	+61 36	7.8	8.1	F2	4	..	37705i	55	1634	41.9	-52 43	7.4	7.3	Ao	7	..	40275b
6	1772	41.7	+49 48	8.27	8.35	A3	3	..	38625i	56	1788	41.9	-54 21	2.01	2.01	Ao	..	R	28,202
7	2157	41.7	+38 58	9.1	9.4	Fo	2	..	37390i	57	1678	41.9	-57 24	8.2	8.5	Go	3	..	41151b
8	2216	41.7	+20 17	8.8	9.8	Ko	3	..	37617i	58	933	41.9	-64 34	8.2	9.2	Ko	5	..	21452b
9	1901	41.7	+15 42	7.68	7.68	Ao	3	..	37617i	59	352	42.0	+74 56	8.52	9.59	K2	2	..	37714i
10	1912	41.7	+11 47	7.5	8.6	K2	3	..	37628i	60	1871	42.0	+34 59	7.87	8.37	F8	5	..	38634i
11	2053	41.7	+9 45	8.37	8.51	A5	4	..	37628i	61	2682	42.0	-2 14	9.2	10.0	G5	1	..	22751b
12	2389	41.7	+0 1	8.0	9.0	Ko	4	..	37654i	62	2628	42.0	-5 11	10.0	10.1	A2	2	..	19226b
13	2469	41.7	-3 36	9.2	9.2	Ao	3	..	19226b	63	2629	42.0	-5 58	9.4	10.6	K5	1	..	19226b
14	2720	41.7	-6 54	9.8	10.8	Ko	1	..	19226b	64	2722	42.0	-6 58	9.8	10.6	G5	1	..	19226b
15	2486	41.7	-8 15	7.62	8.62	Ko	7	..	19226b	65	7393	42.0	-25 1	9.50	9.2	Ao	4	..	18994b
16	2638	41.7	-10 35	9.8	9.8	Ao	2	..	19016b	66	4998	42.0	-36 22	7.8	7.4	B8	3	..	42246b
17	2668	41.7	-12 13	9.2	10.4	K5	1	..	19016b	67	4834	42.0	-39 1	8.6	8.5	Ao	4	..	13055b
18	2673	41.7	-13 11	4.44	5.22	G5	..	R	56,85	68	4537	42.0	-46 19	9.8	8.7	B9	4	1,3	40296b
19	4995	41.7	-36 50	10.6	10.1	A	1	..	13055b	69	4077	42.0	-48 59	8.4	8.0	B9	7	..	39930b
20	4496	41.7	-45 40	8.4	7.8	B3	7	..	40296b	70	287	42.0	-80 33	9.3	10.1	G5	1	..	20869b
21	4531	41.7	-46 59	10.9	9.6	A	1	..	39930b	71	1912	42.1	+21 49	9.6	9.7	A5	1	..	10654m
22	1092	41.7	-59 13	8.3	8.3	Ao	1	..	42241b	72	1906	42.1	+12 31	8.6	9.6	Ko	2	0,3 R	38198i
23	730	41.7	-72 13	6.9	7.2	Fo	9	..	24527b	73	1914	42.1	+11 2	8.8	9.6	G5	3	..	37628i
24	232	41.8	+83 6	7.49	8.49	Ko	5	..	37546i	74	2723	42.1	-6 24	8.6	9.4	G5	7	..	19226b
25	1648	41.8	+28 21	8.6	9.2	Go	2	0,2	38630i	75	2392	42.1	-22 37	9.2	9.8	Ko	2	..	13144b
26	1913	41.8	+11 31	7.6	7.6	Ao	7	..	37628i	76	5902	42.1	-27 20	10.1	9.4	Fo	2	..	18994b
27	2470	41.8	-3 14	8.8	9.1	Fo	2	..	22751b	77	6514	42.1	-31 6	8.0	9.1	Ko	4	..	40081b
28	2609	41.8	-8 6	8.8	9.8	Ko	2	..	19226b	78	5088	42.1	-37 30	6.66	7.0	A2	5	2,3	42246b
29	2652	41.8	-9 52	8.7	9.5	G5	2	..	19016b	79	4593	42.1	-40 15	7.50	7.6	B8	3	..	42246b
30	2522	41.8	-20 4	7.73	8.4	Go	7	..	41219b	80	4471	42.1	-42 2	9.5	9.7	Ao	2	0,1	13064b
31	7387	41.8	-24 19	8.8	9.4	K5	1	..	18994b	81	4591	42.1	-42 57	8.3	8.6	Ko	2	2,2	13064b
32	6721	41.8	-29 32	10.3	10.1	Ao	2	..	18994b	82	4785	42.1	-44 37	9.0	9.0	Ko	2	..	19156b
33	5408	41.8	-33 6	9.0	9.0	Ao	3	..	40081b	83	3786	42.1	-49 13	8.2	8.9	Ko	3	..	39930b
34	5225	41.8	-34 55	9.0	9.6	Ao	3	..	40081b	84	3190	42.1	-51 16	9.6	9.5	A	1	..	40275b
35	4748	41.8	-39 23	7.9	8.0	G5	4	..	13055b	85	525	42.1	-73 15	7.06	6.8	Ao	10	..	24527b
36	4498	41.8	-45 32	8.5	8.5	B8	3	..	40296b	86	1858	42.2	+43 31	8.4	9.4	Ko	2	..	38639i
37	4534	41.8	-46 50	8.5	8.7	A3	3	..	39930b	87	2043	42.2	+18 25	8.8	9.3	F8	3	..	10654m
38	903	41.8	-66 26	10.2	10.6	F5	2	..	21452b	88	2130	42.2	-1 31	5.22	5.22	Ao	..	..	56,85
39	801	41.9	+63 43	9.4	10.0	G	1	E	37517i	89	2587	42.2	-15 12	9.6	10.8	K5	1	..	24583b
40	1021	41.9	+62 12	7.8	8.8	Ko	2	..	38603i	90	2647	42.2	-17 35	9.2	10.2	Ko	1	..	41219b
41	2217	41.9	+20 9	9.9	10.3	F5	2	..	10654m	91	2474	42.2	-18 23	6.56	7.56	Ko	7	..	41219b
42	2056	41.9	+9 37	8.2	9.2	Ko	2	..	37628i	92	2395	42.2	-22 20	8.2	8.6	B9	5	..	13144b
43	2116	41.9	+7 58	8.0	9.1	K2	4	0,3	37628i	93	6423	42.2	-26 15	8.0	8.6	Ko	4	..	18994b
44	2040	41.9	+4 43	7.20	7.18	B9	7	..	37654i	94	5233	42.2	-34 49	9.3	9.2	Ao	4	..	40081b
45	2646	41.9	-15 7	9.4	10.2	G5	2	..	24583b	95	5031	42.2	-35 35	9.3	9.5	Ao	2	..	40081b
46	6417	41.9	-26 14	7.32	8.5	Ko	5	R	18994b	96	4756	42.2	-39 56	8.40	8.5	Ko	3	..	13055b
47	6508	41.9	-26 14	7.10	8.1	A3	..	..	..	97	4593	42.2	-42 15	10.0	9.5	Ao	1	..	13064b
48	5226	41.9	-34 24	9.9	10.1	Ao	2	..	40081b	98	3191	42.2	-51 11	9.6	9.6	F	1	..	40275b
49	5026	41.9	-35 14	9.2	10.7	K5	1	..	40081b	99	1857	42.2	-53 10	8.5	8.5	B9	3	..	40275b
50	5026	41.9	-35 14	9.2	10.7	K5	1	..	40081b	100	1197	42.2	-58 40	8.7	9.1	A5	3	..	41151b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

75000

8<sup>h</sup> 42<sup>m</sup>.2

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	269	42.2	-82 13	6.86	7.4	A5	5	5,8	11010b	51	987	42.5	-67 29	9.4	10.2	G5	3	..	21452b
2	1454	42.3	+51 3	8.1	8.7	Go	3	..	38240i	52	1961	42.6	+38 43	7.16	7.22	A2	7	..	37390i
3	1991	42.3	+13 15	9.3	9.9	G	2	..	37628i	53	2473	42.6	-3 36	8.2	9.2	K2	3	..	19226b
4	2676	42.3	-13 46	8.6	9.2	Go	3	..	19016b	54	2672	42.6	-13 7	8.8	9.8	Ko	2	..	19016b
5	2647	42.3	-15 9	10.3	10.9	Go	2	..	24583b	55	2526	42.6	-19 57	8.0	8.9	Ao	5	..	41219b
6	5907	42.3	-27 34	8.4	9.4	K2	2	..	18994b	56	6435	42.6	-26 19	9.8	9.7	A	1	..	18994b
7	5007	42.3	-36 38	8.6	8.9	Ko	4	..	13055b	57	5710	42.6	-32 52	7.9	8.5	F2	6	..	40081b
8	4476	42.3	-41 58	7.9	8.2	A2	6	2,5	13064b	58	5099	42.6	-37 56	9.3	10.0	Ko	1	..	13055b
9	4611	42.3	-43 53	7.0	6.7	B9	3	..	8888b	59	4848	42.6	-38 29	7.7	7.7	Ko	5	..	13055b
10	904	42.3	-66 27	10.1	11.1	K	1	..	21452b	60	4765	42.6	-40 1	7.80	7.2	B9	2	..	42246b
11	1875	42.4	+41 27	9.2	9.6	F5	1	..	37390i	61	4617	42.6	-43 5	9.8	9.0	A2	2	2,1	13064b
12	2392	42.4	+0 26	8.0	8.0	B9	7	..	37654i	62	4615	42.6	-43 23	8.0	7.2	B9	5	0,7	19156b
13	2067	42.4	-0 44	8.2	9.2	Ko	2	..	22751b	63	4517	42.6	-45 40	4.09	4.09	Ao	..	0,7 R	28,202
14	2454	42.4	-4 47	10.3	10.3	Ao	1	..	19226b	64	4332	42.6	-47 12	9.6	8.7	B9	3	1,2	39930b
15	2632	42.4	-5 32	9.1	10.2	K2	2	..	19226b	65	3792	42.6	-49 6	10.0	9.5	A2	1	..	39930b
16	2630	42.4	-5 38	9.0	10.0	Ko	3	..	19226b	66	3196	42.6	-52 3	9.2	9.3	F5	2	..	40275b
17	2612	42.4	-7 57	9.4	9.9	F8	2	..	19226b	67	1639	42.6	-52 34	8.9	9.0	Ao	3	..	40275b
18	2641	42.4	-10 25	8.7	9.2	F8	3	..	19016b	68	1868	42.6	-53 15	8.9	8.6	B5	3	..	40275b
19	2642	42.4	-10 31	9.1	9.9	G5	1	..	19016b	69	1688	42.6	-57 58	9.0	8.9	A2	2	..	41151b
20	2671	42.4	-12 42	8.4	8.9	F8	5	..	19016b	70	1086	42.6	-62 9	8.1	8.9	G5	3	..	13025b
21	6735	42.4	-29 21	7.60	8.8	R8	5	R	40081b	71	906	42.6	-67 3	9.6	9.9	F2	5	..	21452b
22	6734	42.4	-29 23	8.2	8.7	Ko	3	..	18994b	72	830	42.6	-68 28	9.6	9.7	A5	4	..	21452b
23	6780	42.4	-30 59	9.6	9.4	G5	2	..	40081b	73	710	42.7	+64 47	8.49	9.05	Go	2	..	37517i
24	6523	42.4	-31 12	9.6	9.3	Ao	4	..	40081b	74	1884	42.7	+30 51	8.7	9.7	Ko	2	5,1	38637i
25	5416	42.4	-33 33	7.32	8.4	Ko	6	..	40081b	75	1989	42.7	+25 27	10.1	10.1	A	1	..	38173i
26	4512	42.4	-45 55	8.2	8.2	B3	5	5,3	40296b	76	1914	42.7	+21 4	9.1	9.6	F8	4	..	10654b
27	4544	42.4	-46 29	9.6	9.3	K2	1	..	40296b	77	2029	42.7	+7 2	8.6	9.6	Ko	2	..	37654i
28	4329	42.4	-47 34	8.5	7.8	Ao	4	..	13038b	78	2055	42.7	+2 51	8.20	8.48	Fo	4	..	37654i
29	1862	42.4	-53 29	9.0	9.2	A2	2	..	40275b	79	2674	42.7	-12 51	9.2	9.5	Fo	3	..	19016b
30	1076	42.4	-61 44	9.0	9.4	Ao	3	..	40095b	80	5042	42.7	-35 13	8.90	9.2	A5	4	..	40081b
31	1337	42.5	+56 34	8.6	9.0	F5	3	..	37705i	81	4602	42.7	-40 45	6.14	6.3	Ao	6	..	42246b
32	1876	42.5	+41 27	8.0	9.2	K5	1	..	37390i	82	4479	42.7	-41 40	7.9	7.9	B8	5	0,3	13064b
33	2219	42.5	+20 2	9.5	10.3	G5	2	..	10654m	83	4605	42.7	-42 23	9.2	8.5	B9	5	0,3	13064b
34	2105	42.5	+18 58	9.5	9.8	F2	2	..	10654m	84	3793	42.7	-49 10	8.8	8.9	Fo	3	..	39930b
35	1941	42.5	+17 46	7.5	8.6	K2	3	..	37617i	85	1798	42.7	-54 55	9.6	9.7	A2	1	..	40275b
36	2633	42.5	-5 23	9.0	10.2	K5	2	..	19226b	86	1202	42.7	-58 21	6.30	6.4	B8	7	..	42241b
37	2724	42.5	-6 41	10.0	10.0	Ao	2	..	19226b	87	988	42.7	-67 31	10.3	10.4	A3	2	..	21452b
38	2458	42.5	-11 11	9.4	10.4	Ko	1	..	19016b	88	831	42.7	-68 17	10.3	10.3	A	1	..	21452b
39	2459	42.5	-11 53	8.8	8.9	A5	4	..	19016b	89	273	42.8	+81 40	7.73	8.01	Fo	5	..	37546i
40	2587	42.5	-21 18	8.6	9.2	A2	3	..	13144b	90	1992	42.8	+24 28	8.7	8.7	B9	3	..	38173i
41	6517	42.5	-28 16	8.0	9.7	Ko	1	..	18994b	91	2044	42.8	+18 2	8.2	8.2	Ao	3	..	37617i
42	6783	42.5	-30 12	8.90	9.7	K2	2	..	18994b	92	1916	42.8	+11 44	9.1	9.7	G	2	..	37628i
43	5707	42.5	-32 20	8.0	8.4	Ao	6	..	40081b	93	2053	42.8	+3 31	9.5	9.6	A2	2	..	37654i
44	5706	42.5	-32 28	8.7	8.7	Ao	5	..	40081b	94	2476	42.8	-3 40	8.2	8.2	Ao	6	..	22652b
45	5238	42.5	-34 36	8.6	9.2	A2	5	..	40081b	95	2456	42.8	-5 4	8.80	9.30	F8	3	..	19226b
46	5237	42.5	-34 54	10.1	10.0	A3	2	..	40081b	96	2675	42.8	-13 10	8.0	8.0	Ao	8	..	19016b
47	5236	42.5	-35 4	9.7	9.8	A2	2	..	40081b	97	2591	42.8	-15 26	8.6	8.6	Ao	5	0,7	19016b
48	5013	42.5	-36 22	10.1	9.5	Ao	2	..	13055b	98	2589	42.8	-16 41	6.62	7.18	Go	7	R	41219b
49	3542	42.5	-50 22	9.0	8.7	Ao	4	..	40275b	99	2589	42.8	-16 41	6.62	7.18	A2	7	R	41219b
50	3541	42.5	-50 23	8.6	9.3	K5	1	..	40275b	100	2478	42.8	-18 28	8.4	9.4	Ko	3	..	41219b

## THE HENRY DRAPER CATALOGUE.

75100

8<sup>h</sup> 42<sup>m</sup>.8

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	6536	42.8	-31 52	9.6	10.2	K5	1	..	40081b	51	1726	43.1	-55 22	9.4	9.5	A3	2	..	40275b
2	4604	42.8	-41 1	9.5	9.5	Ma	..	..	M	52	1727	43.1	-55 29	7.2	7.2	A5	4	..	42241b
3	4557	42.8	-47 1	8.4	7.8	F2	3	..	13038b	53	910	43.1	-66 17	9.8	11.0	K5	1	..	21452b
4	4091	42.8	-48 19	7.6	8.4	K5	2	..	13038b	54	991	43.1	-67 8	10.6	10.7	A5	1	..	21452b
5	1640	42.8	-52 36	7.7	7.7	B9	6	..	40275b	55	1650	43.2	+28 42	9.5	9.6	A2	2	2,2	3863oi
6	907	42.8	-66 40	9.9	10.4	F8	3	..	21452b	56	1994	43.2	+12 55	6.81	8.16	Ma	5	..	37628i
7	580	42.9	+66 49	7.8	8.6	G5	3	..	37517i	57	1876	43.2	+10 47	7.14	8.49	Ma	4	..	37628i
8	1911	42.9	+11 56	8.4	9.2	G5	3	..	37628i	58	2644	43.2	-10 59	9.4	10.2	G5	2	..	19016b
9	2043	42.9	+ 4 42	8.75	8.83	A3	2	..	37654i	59	2653	43.2	-14 21	10.0	10.0	Ao	1	..	19016b
10	6792	42.9	-30 37	9.6	9.6	F5	3	..	40081b	60	2593	43.2	-15 40	9.4	9.7	Fo	3	..	24583b
11	5425	42.9	-33 41	7.5	7.9	Ao	7	..	40081b	61	2529	43.2	-19 25	8.0	9.3	K5	2	..	41219b
12	5243	42.9	-34 15	6.38	7.0	B3	8	..	8889b	62	2682	43.2	-20 25	8.4	9.8	K2	1	..	13144b
13	5244	42.9	-35 0	10.1	10.1	G5	1	..	40081b	63	6449	43.2	-26 6	10.1	9.4	A2	3	..	18994b
14	3201	42.9	-51 13	8.8	9.6	K5	1	..	40275b	64	6536	43.2	-28 24	9.6	9.2	A	2	..	18994b
15	1873	42.9	-53 9	8.3	9.7	K2	1	..	40275b	65	5251	43.2	-35 5	9.05	10.0	Ko	2	..	40081b
16	990	42.9	-67 50	6.21	8.0	K2	6	..	24527b	66	4627	43.2	-43 29	9.1	9.3	Ko	1	0,1	13064b
17	1641	43.0	+45 20	7.6	8.2	Go	3	..	38625i	67	1647	43.2	-52 39	8.6	9.3	Ko	2	..	40275b
18	1930	43.0	+42 48	8.7	8.7	Ao	3	..	3739oi	68	1806	43.2	-54 35	7.2	7.7	G5	6	0,7	41151b
19	2222	43.0	+20 42	8.9	10.0	K2	3	..	10654m	69	1805	43.2	-54 51	9.7	9.7	Ao	2	..	40275b
20	2059	43.0	+ 5 48	8.6	9.8	K5	1	..	37654i	70	1089	43.2	-62 39	9.3	9.4	A5	1	..	13025b
21	2056	43.0	+ 2 57	7.36	7.78	F5	7	..	37654i	71	1013	43.2	-65 27	6.02	6.6	A2	9	..	19155b
22	6800	43.0	-30 6	8.60	8.8	Ko	4	..	18994b	72	1643	43.3	+45 20	8.6	9.0	F5	2	..	3863oi
23	5248	43.0	-34 12	9.7	10.0	Ao	1	..	40081b	73	1999	43.3	+22 16	9.5	10.6	K2	2	..	10654m
24	5022	43.0	-36 25	8.3	9.2	Ko	3	..	13055b	74	1995	43.3	+12 57	8.0	8.8	G5	3	..	37628i
25	4773	43.0	-39 32	6.94	7.3	B9	4	..	42246b	75	2057	43.3	+ 2 55	7.11	8.11	Ko	6	..	37654i
26	4610	43.0	-42 11	7.3	7.1	B9	7	0,10	19156b	76	2684	43.3	-13 36	9.2	10.4	K5	1	..	19016b
27	4611	43.0	-42 25	9.4	8.3	B9	5	0,3	13064b	77	2592	43.3	-17 7	9.4	9.4	Ao	1	..	41219b
28	4564	43.0	-46 18	9.6	9.0	Ao	2	..	40296b	78	7756	43.3	-24 1	7.9	8.6	Ao	7	..	18994b
29	4337	43.0	-47 11	7.3	7.5	B8	7	..	13038b	79	6574	43.3	-25 44	9.1	9.5	Go	1	..	18994b
30	3800	43.0	-49 13	9.4	9.2	Ao	2	..	39930b	80	6537	43.3	-28 25	8.8	8.9	Ao	3	..	18994b
31	3202	43.0	-51 10	9.4	9.6	A3	1	..	40275b	81	6757	43.3	-29 17	9.1	9.6	G5	2	..	18994b
32	1802	43.0	-54 51	8.2	8.9	Ko	3	..	40275b	82	6807	43.3	-30 51	10.3	9.7	A2	2	..	40081b
33	1690	43.0	-57 17	9.1	9.2	Ko	1	..	41151b	83	3560	43.3	-50 10	9.8	9.6	Ao	1	..	39930b
34	536	43.0	-74 14	7.5	7.5	B9	5	..	24452b	84	1648	43.3	-52 45	8.6	8.4	A2	3	..	40275b
35	1642	43.1	+45 3	7.72	7.72	Ao	5	..	38625i	85	1878	43.3	-53 21	9.1	9.1	Ao	2	..	40275b
36	2223	43.1	+20 29	10.3	10.3	Ao	2	..	10654m	86	1730	43.3	-55 44	8.1	8.5	Ko	3	..	41151b
37	2040	43.1	+ 6 13	4.42	4.42	Ao	..	R	1795c	87	1014	43.3	-65 19	8.3	9.3	Ko	7	..	21452b
38	2173	43.1	+ 0 55	7.59	8.66	K2	4	..	37654i	88	1578	43.4	+50 0	9.4	10.2	G5	1	..	38625i
39	2635	43.1	- 6 4	9.6	10.0	F5	2	..	19226b	89	2111	43.4	+39 58	8.47	9.03	Go	3	..	3739oi
40	2727	43.1	- 6 11	6.22	7.22	Ko	10	..	19226b	90	2034	43.4	+ 6 57	8.0	8.1	A2	4	..	37654i
41	2590	43.1	-16 41	8.7	9.7	K	1	..	41219b	91	2058	43.4	+ 3 26	8.9	9.3	F5	2	..	37654i
42	2481	43.1	-18 21	8.7	9.7	Ko	2	..	41219b	92	2059	43.4	+ 2 58	9.1	9.6	F8	1	..	37654i
43	7754	43.1	-23 49	8.4	9.2	F8	2	..	18994b	93	2136	43.4	- 2 8	7.47	8.25	G5	3	..	37654i
44	6446	43.1	-26 41	8.4	9.1	Ko	3	..	18994b	94	2638	43.4	- 5 10	8.50	9.68	K5	2	..	19226b
45	5922	43.1	-27 23	8.2	8.2	Ao	6	..	18994b	95	2637	43.4	- 6 10	10.3	10.4	A5	1	..	19226b
46	5430	43.1	-33 16	9.9	9.6	Fo	1	..	40081b	96	2729	43.4	- 6 57	9.2	9.3	A3	5	..	19226b
47	4774	43.1	-39 7	8.3	7.3	Ao	3	..	42246b	97	2617	43.4	- 7 36	7.8	7.9	A2	8	..	19226b
48	4624	43.1	-43 36	9.0	7.8	A2	5	0,4	13064b	98	5927	43.4	-28 0	8.20	9.1	F5	5	..	18994b
49	4526	43.1	-45 32	5.54	5.8	B5p	..	5,4 R	28,202	99	5255	43.4	-34 14	6.67	7.6	K5	5	..	40081b
50	4339	43.1	-47 32	8.5	8.7	Ko	2	..	39930b	100	4341	43.4	-47 58	9.1	8.7	Go	1	..	39930b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

75200

8<sup>h</sup> 43<sup>m</sup>.4

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1651	43.4	-52 9	8.0	9.5	K2	2	..	40275b	51	2663	43.8	-9 20	9.0	9.1	A3	3	..	19226b
2	1652	43.4	-52 28	7.7	7.4	A3	6	..	40275b	52	2687	43.8	-20 59	9.1	9.5	A0	3	..	13144b
3	1697	43.4	-57 22	9.2	9.2	A	1	..	41151b	53	6550	43.8	-31 30	9.3	9.6	F2	2	..	40081b
4	1105	43.4	-59 18	8.9	9.2	A0	2	..	41151b	54	5728	43.8	-33 1	6.90	7.8	K0	..	0,7	56,125
5	992	43.4	-67 38	9.6	10.4	G5	4	..	21452b	55	5440	43.8	-33 7	9.5	9.6	Go	2	..	40081b
6	1847	43.5	+26 48	9.9	9.9	A0	1	..	38630i	56	4797	43.8	-39 51	7.9	8.8	K5	3	..	13055b
7	2174	43.5	+1 18	7.7	8.1	F5	6	R	37654i	57	4616	43.8	-40 27	8.0	8.5	F8	4	0,4	13055b
8	2402	43.5	-9 10	8.6	8.7	A2	3	..	19226b	58	4502	43.8	-42 3	7.1	7.2	B9	7	..	19156b
9	5256	43.5	-34 14	11.7	10.0	A	1	R	40081b	59	3812	43.8	-49 47	9.2	8.9	B9	3	..	39930b
10	5116	43.5	-37 45	7.9	8.9	K0	3	..	13055b	60	934	43.8	-64 48	9.6	9.6	A0	5	..	21452b
11	4635	43.5	-43 42	8.2	7.9	B5	5	5,7	19156b	61	76	43.8	-88 34	7.8	7.8	B9	6	1,3	22578b
12	4097	43.5	-48 23	8.5	8.0	A0	3	..	13038b	62	1918	43.9	+21 35	10.1	11.2	K2	1	..	10654m
13	994	43.5	-67 5	9.9	10.4	F8	3	..	21452b	63	2042	43.9	+6 20	8.2	8.2	A0	4	..	37654i
14	1776	43.6	+49 43	8.32	8.74	F5	2	..	38625i	64	2494	43.9	-8 20	8.6	9.0	F5	4	..	19226b
15	1898	43.6	+34 4	7.40	8.40	K0	7	..	38634i	65	2686	43.9	-13 18	8.7	9.9	K5	1	..	19016b
16	1828	43.6	+29 49	7.46	8.46	K0	2	..	38173i	66	2597	43.9	-21 31	8.6	8.9	F2	4	..	13144b
17	2069	43.6	-0 40	6.56	7.56	K0	5	..	37654i	67	2403	43.9	-22 46	8.6	9.9	K0	1	..	13144b
18	2646	43.6	-10 51	9.6	9.9	F0	2	..	19016b	68	6819	43.9	-30 33	8.4	9.9	K5	1	..	40081b
19	2595	43.6	-21 54	9.2	9.8	A	1	R	13144b	69	6818	43.9	-30 52	8.4	9.0	Go	4	..	40081b
20	2596	43.6	-22 2	9.0	9.8	A0	2	..	13144b	70	5441	43.9	-33 48	9.3	9.3	A0	2	..	40081b
21	5724	43.6	-32 57	8.6	10.1	K5	2	..	40081b	71	4883	43.9	-38 35	6.93	6.9	A0	4	..	42246b
22	5030	43.6	-36 23	7.4	7.4	B3	1	R	42246b	72	4879	43.9	-38 38	6.56	6.7	B9	3	..	42246b
23	4788	43.6	-39 26	7.5	7.2	A0	3	..	42246b	73	4882	43.9	-38 53	9.2	8.6	B8	4	..	13055b
24	4613	43.6	-40 49	8.0	7.5	A0	6	2,7	13055b	74	4624	43.9	-42 23	8.5	8.5	K0	2	..	19156b
25	4612	43.6	-41 4	9.3	8.8	A0	3	0,2	13064b	75	4643	43.9	-43 41	9.1	8.4	B3	3	2,3-	19156b
26	4494	43.6	-41 31	9.3	9.2	A0	1	..	19156b	76	4541	43.9	-45 48	5.83	6.8	Fop	..	0,8 R	56,126
27	1657	43.6	-52 30	8.2	9.0	K0	1	..	40275b	77	1033	43.9	-63 31	8.6	8.7	A2	3	..	13025b
28	274	43.7	+81 10	8.7	9.5	G5	2	..	37493i	78	741	43.9	-71 31	9.2	9.2	A	1	..	24527b
29	1152	43.7	+58 44	8.0	9.0	K0	1	..	37705i	79	1792	44.0	+43 52	8.4	9.5	K2	2	..	38639i
30	1153	43.7	+57 54	7.6	7.9	F0	6	..	37705i	80	1876	44.0	+35 23	8.1	8.2	A2	5	..	38634i
31	1672	43.7	+27 10	8.7	8.8	A3	3	..	38173i	81	1920	44.0	+21 19	9.5	10.5	K0	3	..	10654m
32	2048	43.7	+4 7	7.8	8.2	F5	6	..	37654i	82	2461	44.0	-4 52	7.75	8.75	K0	6	..	19226b
33	2478	43.7	-4 9	8.4	9.6	K5	3	..	19226b	83	2655	44.0	-17 41	8.2	9.0	G5	4	..	41219b
34	2487	43.7	-18 40	8.0	9.1	K2	2	..	41219b	84	2488	44.0	-19 2	9.1	9.6	F8	1	..	41219b
35	6554	43.7	-28 52	10.1	9.9	A0	1	..	18994b	85	6586	44.0	-25 38	9.3	9.4	Go	1	..	18994b
36	5261	43.7	-34 24	10.3	10.1	A	1	..	40081b	86	5939	44.0	-27 23	9.0	8.6	A2	4	..	18994b
37	5122	43.7	-37 35	10.1	9.5	A0	1	..	13055b	87	5729	44.0	-32 16	9.3	10.2	K5	1	..	40081b
38	5120	43.7	-37 39	9.0	8.7	B8	4	..	13055b	88	5059	44.0	-35 21	8.3	9.2	G5	4	..	40081b
39	4498	43.7	-42 1	9.3	8.8	A0	2	..	19156b	89	4507	44.0	-41 22	6.48	7.2	Go	7	..	19156b
40	4621	43.7	-42 13	8.8	7.6	A0	5	..	19156b	90	4628	44.0	-42 7	8.3	7.6	A0	5	..	19156b
41	4818	43.7	-44 42	7.0	7.8	B5	2	5,2 R	4947b	91	4629	44.0	-42 11	10.5	9.4	F2	3	..	19156b
42	4576	43.7	-46 46	10.0	8.8	F0	2	..	40296b	92	4545	44.0	-45 40	8.8	9.0	F2	2	..	40296b
43	4348	43.7	-47 27	9.6	8.7	A0	3	..	40296b	93	4358	44.0	-47 29	9.4	8.7	B9	3	..	40296b
44	3810	43.7	-49 34	11.5	9.6	A2	1	..	39930b	94	1665	44.0	-52 37	9.5	9.5	A0	1	..	40275b
45	3214	43.7	-51 44	9.2	9.0	A2	3	..	40275b	95	1888	44.0	-53 49	8.1	7.9	A0	7	..	40275b
46	738	43.7	-71 27	8.1	8.9	G5	3	..	24527b	96	1813	44.0	-54 27	9.0	8.8	A0	3	..	40275b
47	1875	43.8	+35 45	8.1	9.1	K0	3	..	38634i	97	996	44.0	-67 55	8.8	9.4	Go	4	..	21452b
48	1917	43.8	+20 52	9.9	10.3	F5	3	..	10654m	98	1154	44.1	+58 31	7.8	8.1	F2	5	..	37705i
49	2048	43.8	+18 19	8.9	9.9	K0	2	..	10654m	99	1914	44.1	+12 32	8.4	8.8	F5	5	..	37628i
50	2124	43.8	+8 24	9.1	9.5	F5	2	..	37628i	100	2063	44.1	+9 14	7.6	7.7	A5	5	..	37628i

## THE HENRY DRAPER CATALOGUE.

75300

8<sup>h</sup> 44<sup>m</sup>.1

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	2045	44.1	+ 6 5	8.4	9.2	G5	1	..	37654i	51	3221	44.3	-51 33	7.7	8.1	Go	6	..	40275b
2	2050	44.1	+ 3 52	7.8	8.4	Go	6	..	37654i	52	1967	44.4	+38 11	8.7	9.7	Ko	2	..	37390i
3	2696	44.1	- 2 45	9.2	9.8	Go	2	..	22652b	53	1878	44.4	+35 26	6.73	7.23	F8	7	..	38634i
4	2623	44.1	- 7 55	9.4	9.9	F8	2	..	19226b	54	2051	44.4	+18 13	8.9	9.7	G5	3	..	10654m
5	7424	44.1	-24 13	9.1	9.1	Ao	3	..	18994b	55	1912	44.4	+15 13	7.24	7.52	Fo	4	..	37617i
6	6562	44.1	-28 17	6.82	8.2	Ma	8	..	18994b	56	2126	44.4	+ 7 55	9.1	9.1	Ao	2	..	38198i
7	5061	44.1	-35 25	9.5	9.5	A2	2	..	40081b	57	2072	44.4	+ 1 51	6.91	6.89	B9	9	..	37654i
8	5130	44.1	-37 37	9.3	8.9	B9	4	..	13055b	58	2626	44.4	- 8 4	9.6	9.9	Fo	2	..	19226b
9	4547	44.1	-46 5	8.0	7.5	B2	5	3,4	40296b	59	2406	44.4	-22 49	9.0	9.6	Ao	2	..	13144b
10	4587	44.1	-46 18	10.2	8.7	Ao	3	..	40296b	60	7431	44.4	-25 5	8.70	9.5	K5	2	..	18994b
11	1865	44.1	-56 25	4.63	4.46	B3	..	O, R	28,202	61	6790	44.4	-29 12	9.6	9.3	Ao	3	..	18994b
12	1015	44.1	-65 45	8.9	10.1	K5	4	..	21452b	62	6832	44.4	-30 24	8.8	9.9	K2	2	..	40081b
13	818	44.1	-70 36	9.4	9.4	Ao	2	E	21452b	63	6833	44.4	-31 2	8.1	9.6	Ko	4	..	40081b
14	191	44.1	-84 20	9.1	10.2	K2	2	..	22238b	64	4638	44.4	-42 59	7.4	7.6	Ko	6	O,4	13064b
15	169	44.1	-86 3	8.5	8.8	F2	4	..	15145b	65	3822	44.4	-49 10	8.9	8.4	A2	4	..	39930b
16	1874	44.2	+36 30	8.6	8.7	A2	3	..	37390i	66	3821	44.4	-49 13	9.1	9.6	Ko	1	..	39930b
17	1848	44.2	+26 44	8.6	9.6	Ko	1	..	38630i	67	3819	44.4	-49 47	9.2	8.7	B9	3	..	39930b
18	2051	44.2	+ 4 3	8.2	9.0	G5	3	..	37654i	68	1816	44.4	-54 25	8.9	9.2	Ko	2	..	40275b
19	2732	44.2	- 6 24	8.6	9.7	K2	3	..	19226b	69	1018	44.4	-65 18	10.1	10.7	Go	1	..	21452b
20	2731	44.2	- 6 38	8.2	8.5	Fo	6	..	19226b	70	233	44.5	+83 8	7.0	7.3	Fo	7	..	37546i
21	2685	44.2	-12 28	9.6	9.7	A2	3	..	19016b	71	1286	44.5	+52 52	9.2	10.6	Ma	..	..	M
22	6589	44.2	-25 47	8.8	8.6	B9	6	..	18994b	72	1877	44.5	+41 18	7.72	8.14	F5	4	..	37390i
23	5268	44.2	-34 56	8.80	8.9	B9	4	..	40081b	73	1922	44.5	+11 38	8.6	9.4	G5	2	..	37628i
24	4510	44.2	-41 54	7.3	6.9	B9	7	..	19156b	74	2036	44.5	+ 7 24	6.79	7.79	Ko	6	..	37654i
25	4106	44.2	-48 54	10.5	9.3	A3	2	..	40296b	75	2063	44.5	+ 3 7	8.2	9.2	Ko	2	..	37654i
26	3217	44.2	-51 37	8.2	8.4	Fo	5	..	40275b	76	2139	44.5	- 1 26	9.1	9.1	Ao	2	..	22652b
27	1750	44.2	-55 21	9.1	9.1	Ao	2	..	41151b	77	2640	44.5	- 5 28	9.8	9.8	Ao	3	..	19226b
28	340	44.2	-79 19	8.2	8.7	F8	4	..	20869b	78	2627	44.5	- 7 35	8.8	10.2	Ma	1	..	19226b
29	1778	44.3	+48 56	9.0	10.4	Ma	..	..	M	79	2690	44.5	-13 14	9.2	9.5	Fo	2	..	19016b
30	2160	44.3	+38 50	8.1	9.1	Ko	2	..	37390i	80	2690	44.5	-20 52	9.4	9.8	A3	1	..	13144b
31	1916	44.3	+37 16	7.9	9.0	K2	3	..	37390i	81	2407	44.5	-22 30	8.2	9.3	Ao	3	..	13144b
32	1765	44.3	+33 41	6.22	6.72	F8	7	O,5	38634i	82	5949	44.5	-27 22	8.4	9.1	Ko	3	..	18994b
33	2699	44.3	- 3 4	5.19	5.17	B9	..	..	56,85	83	5451	44.5	-33 34	9.2	9.6	Ko	1	..	40081b
34	2733	44.3	- 6 44	8.8	9.1	F2	5	..	19226b	84	5276	44.5	-34 42	9.0	10.0	F8	2	..	40081b
35	2625	44.3	- 8 2	10.0	10.0	Ao	1	..	19226b	85	5138	44.5	-37 43	9.5	9.2	Ao	3	..	13055b
36	2498	44.3	- 8 28	9.2	9.5	Fo	3	..	19226b	86	4515	44.5	-41 54	9.3	8.9	Ao	1	..	19156b
37	2650	44.3	-10 30	8.6	9.0	F5	4	..	19016b	87	4516	44.5	-42 6	6.22	7.1	B8	5	O,8	4947b
38	2649	44.3	-10 59	10.0	10.3	Fo	1	..	19016b	88	1446	44.6	+46 17	7.8	9.0	K5	2	..	38625i
39	2687	44.3	-12 17	9.6	10.7	K2	1	..	19016b	89	2109	44.6	+19 39	8.8	9.4	Go	4	..	10654m
40	2686	44.3	-12 22	8.6	9.1	F8	5	..	19016b	90	2037	44.6	+ 6 56	6.76	6.74	B9	8	..	37654i
41	2688	44.3	-12 39	8.8	10.0	K5	1	..	19016b	91	2651	44.6	-10 31	7.36	8.36	Ko	6	..	19016b
42	2689	44.3	-13 2	8.6	8.9	Fo	4	..	19016b	92	2692	44.6	-12 30	10.0	10.5	F8	2	..	19016b
43	2661	44.3	-14 28	9.4	9.5	A2	2	..	19016b	93	2597	44.6	-15 12	7.41	7.91	F8	8	..	19016b
44	6590	44.3	-25 17	7.5	8.5	A2	5	..	18994b	94	2660	44.6	-17 37	8.6	9.6	Ko	2	..	41219b
45	5064	44.3	-36 2	9.3	9.5	Fo	2	..	40081b	95	6794	44.6	-29 56	9.35	9.4	A2	3	..	18994b
46	4636	44.3	-42 10	9.1	8.3	Ao	1	..	19156b	96	5742	44.6	-32 15	8.9	9.6	K5	2	..	40081b
47	4637	44.3	-42 13	9.2	8.9	B9	3	..	13064b	97	4518	44.6	-41 30	9.3	9.1	Ao	2	..	19156b
48	4649	44.3	-43 51	8.7	8.8	A3	2	..	19156b	98	4658	44.6	-43 34	9.4	8.4	Ao	3	O,3	13064b
49	4590	44.3	-46 50	9.2	8.8	B9	4	..	40296b	99	1709	44.6	-57 42	7.9	8.3	Ko	4	..	41151b
50	3818	44.3	-49 23	11.5	9.3	A2	1	..	39930b	100	1035	44.6	-63 12	9.1	9.2	A2	2	..	13025b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

75400

8<sup>h</sup> 44<sup>m</sup>.6

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1020	m. 44.6	° 47	10.3	10.9	Go	1	..	21452b	51	1095	m. 44.9	° 49	7.7	8.7	Ko	4	..	13025b
2	1010	44.6	-66 0	9.1	9.9	G5	4	..	21452b	52	1021	44.9	-65 54	10.1	10.9	G5	1	..	21452b
3	711	44.7	+64 4	9.4	10.2	G5	1	..	37517i	53	822	44.9	-70 14	9.4	10.0	Go	3	..	21452b
4	1880	44.7	+35 10	8.1	8.7	Go	5	..	38634i	54	1881	45.0	+35 5	8.6	9.0	F5	3	..	38634i
5	1795	44.7	+32 43	9.2	9.7	F8	1	..	38634i	55	1904	45.0	+34 30	9.2	9.7	F8	3	..	38634i
6	2127	44.7	+ 8 38	8.4	9.2	G5	3	..	37628i	56	2644	45.0	- 5 37	8.6	9.6	Ko	4	..	19226b
7	2073	44.7	+ 2 44	7.31	8.09	G5	7	..	37654i	57	2666	45.0	-14 19	9.4	10.2	G5	1	..	19016b
8	2642	44.7	- 5 19	7.25	8.03	G5	8	..	19226b	58	6604	45.0	-26 3	7.9	8.5	Ao	8	..	18994b
9	2499	44.7	- 8 15	8.0	8.3	Fo	6	..	19226b	59	5960	45.0	-27 19	10.1	9.7	Ko	1	..	18994b
10	2654	44.7	-10 39	7.56	8.63	K2	6	..	19016b	60	6568	45.0	-31 31	9.6	10.2	K2	1	..	40081b
11	2694	44.7	-12 22	10.0	10.4	F5	1	..	19016b	61	6569	45.0	-31 53	8.4	8.8	Fo	6	..	40081b
12	2599	44.7	-15 25	9.2	9.3	A2	4	..	19016b	62	5459	45.0	-33 17	9.0	9.0	Fo	3	..	40081b
13	5744	44.7	-32 5	9.9	9.6	Ko	2	..	40081b	63	5075	45.0	-35 31	8.6	9.2	A2	3	..	40081b
14	3228	44.7	-51 13	10.0	8.0	Ao	5	..	40275b	64	4656	45.0	-42 15	10.5	9.5	A3	1	..	19156b
15	820	44.7	-70 35	9.0	10.2	K5	1	E	21452b	65	4605	45.0	-46 32	9.4	8.7	Fo	3	..	40296b
16	372	44.7	-78 37	5.62	5.60	B9	..	O, R	56,126	66	1675	45.0	-52 29	6.37	6.4	B9	5	..	4985b
17	381	44.8	+74 48	8.42	9.20	G5	3	..	37714i	67	1758	45.0	-56 0	8.4	8.2	A2	3	..	41151b
18	1196	44.8	+59 3	8.7	9.7	Ko	1	..	37705i	68	914	45.0	-66 20	10.2	11.0	G5	1	..	21452b
19	1674	44.8	+27 12	7.39	7.67	Fo	5	..	38173i	69	2110	45.1	+19 13	6.14	6.14	Ao	8	..	37617i
20	2702	44.8	- 2 48	8.6	9.8	K5	2	..	22652b	70	2057	45.1	+18 22	6.72	7.50	G5	5	..	37617i
21	2465	44.8	- 4 22	9.1	10.2	K2	2	..	19226b	71	2467	45.1	- 4 52	8.8	9.1	F2	3	..	19226b
22	2500	44.8	- 8 16	6.82	6.96	A5	9	..	19226b	72	2469	45.1	-11 43	9.2	10.2	K	1	..	19016b
23	2597	44.8	-16 49	8.6	9.0	F5	3	..	41219b	73	2692	45.1	-20 12	9.4	9.8	A3	1	..	13144b
24	4905	44.8	-38 39	9.2	7.9	Ao	6	..	13055b	74	5962	45.1	-28 1	10.8	9.4	A3	1	..	18994b
25	4521	44.8	-41 49	9.9	9.2	Ao	1	..	19156b	75	4909	45.1	-38 36	6.99	7.2	Ko	7	..	13055b
26	3824	44.8	-49 13	6.81	7.6	F2	3	3,8	4985b	76	4824	45.1	-39 55	7.9	7.6	B8	8	..	13055b
27	913	44.8	-66 11	10.5	10.6	A2	2	..	21452b	77	4658	45.1	-42 7	10.0	9.2	B9	2	..	19156b
28	528	44.8	-73 57	7.7	7.7	Ao	3	..	24452b	78	4377	45.1	-47 9	8.9	8.1	Fo	4	..	40296b
29	1580	44.9	+50 46	8.4	9.2	G5	2	..	38240i	79	3830	45.1	-49 10	8.4	9.2	Ko	1	..	39930b
30	1861	44.9	+43 28	8.7	9.1	F5	1	..	38639i	80	3829	45.1	-49 23	9.1	8.4	A2	3	..	39930b
31	1955	44.9	+17 24	7.8	7.9	A3	4	..	37617i	81	3574	45.1	-50 31	8.9	8.7	Ao	3	..	40275b
32	2067	44.9	+ 9 38	8.6	9.8	K5	1	..	37628i	82	1901	45.1	-53 32	8.4	8.6	F5	3	..	40275b
33	2482	44.9	- 3 24	9.4	10.5	K2	1	..	19226b	83	1221	45.1	-58 7	8.8	8.3	B8	3	..	41151b
34	2736	44.9	- 6 15	10.0	10.8	G5	1	..	19226b	84	1023	45.1	-65 43	9.9	10.7	G5	1	..	21452b
35	2468	44.9	-12 5	8.2	8.2	Ao	8	..	19016b	85	538	45.1	-76 46	8.0	8.0	Ao	3	R	24452b
36	2692	44.9	-13 40	8.4	8.4	Ao	7	..	19016b	86	1027	45.2	+62 20	5.72	6.00	Fo	10	O,9 R	37705i
37	2665	44.9	-15 6	9.11	9.53	F5	2	..	19016b	87	1198	45.2	+59 26	6.08	6.36	Fo	8	..	37705i
38	2600	44.9	-15 40	8.4	9.6	K5	2	..	19016b	88	1693	45.2	+47 57	8.0	8.8	G5	3	..	38625i
39	6476	44.9	-26 43	9.8	9.7	F8	1	..	18994b	89	1796	45.2	+32 6	9.1	10.1	Ko	1	..	38634i
40	6799	44.9	-29 51	8.8	9.0	Go	5	..	18994b	90	2706	45.2	- 2 22	8.1	9.3	K5	3	..	22652b
41	5282	44.9	-34 24	8.4	9.2	A2	3	..	40081b	91	2470	45.2	-11 48	10.0	10.0	Ao	4	..	19016b
42	5052	44.9	-36 13	8.4	8.9	Ko	3	..	40081b	92	2663	45.2	-17 46	9.2	9.6	F5	2	..	41219b
43	5144	44.9	-37 22	7.9	9.6	K5	2	..	13055b	93	2493	45.2	-18 32	9.6	9.6	Ao	1	..	41219b
44	5146	44.9	-37 38	8.6	8.0	B9	2	..	42246b	94	2495	45.2	-18 52	8.6	9.2	Go	2	..	41219b
45	4907	44.9	-38 51	6.99	6.8	A3	4	..	42246b	95	2693	45.2	-20 41	6.42	7.4	A3	8	..	41219b
46	4523	44.9	-42 1	7.9	7.1	B9	7	..	19156b	96	2410	45.2	-22 23	8.6	9.8	K5	1	..	13144b
47	3826	44.9	-49 50	9.2	9.2	Ao	2	..	39930b	97	6852	45.2	-31 3	9.8	9.9	A3	1	..	40081b
48	1899	44.9	-53 11	9.0	9.2	F2	2	..	40275b	98	5461	45.2	-33 55	8.7	9.1	G5	2	..	40081b
49	1898	44.9	-53 23	9.1	9.2	A2	1	..	40275b	99	5289	45.2	-35 2	9.05	9.8	K2	2	..	40081b
50	1714	44.9	-57 17	9.0	9.1	A2	2	..	41151b	100	4911	45.2	-39 2	7.5	7.2	B9	4	..	42246b

THE HENRY DRAPER CATALOGUE.

75500

8<sup>h</sup> 45<sup>m</sup>.2

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
		m.	° ' "									m.	° ' "						
1	4533	45.2	-41 44	9.3	9.2	F2	2	..	19156b	51	3839	45.5	-50 0	9.38	9.0	B	2	..	39930b
2	1904	45.2	-53 13	8.0	8.0	B9	5	..	40275b	52	1877	45.5	-56 20	8.5	8.9	Ko	2	..	41151b
3	915	45.2	-66 11	8.5	8.6	A2	3	..	24527b	53	1297	45.6	+55 20	7.35	7.91	Go	6	..	37705i
4	838	45.2	-68 9	10.0	10.3	F2	3	..	21452b	54	1582	45.6	+50 20	7.77	8.27	F8	4	..	38240i
5	375	45.2	-78 42	7.5	7.5	Ao	5	..	20869b	55	1650	45.6	+45 15	8.0	8.4	F5	4	..	38639i
6	1794	45.3	+44 6	5.24	6.02	G5	8	..	37390i	56	1935	45.6	+42 23	6.14	7.14	Ko	6	..	37390i
7	1934	45.3	+42 48	9.2	10.2	Ko	1	..	38639i	57	1926	45.6	+21 28	9.1	9.7	Go	3	..	37617i
8	1852	45.3	+26 40	9.5	10.5	Ko	1	..	38630i	58	1833	45.6	+16 22	7.21	7.99	G5	2	..	37617i
9	2059	45.3	+18 24	8.4	9.6	K5	3	..	10654m	59	2707	45.6	- 2 29	9.1	10.1	Ko	1	..	22652b
10	2671	45.3	-10 0	9.61	9.89	Fo	2	..	19016b	60	2487	45.6	- 3 32	9.4	10.0	Go	1	..	19226b
11	2497	45.3	-18 51	9.0	9.5	F8	2	..	41219b	61	2469	45.6	- 4 20	7.16	7.22	A2	9	..	22652b
12	6612	45.3	-25 8	9.3	10.6	F5	1	..	18994b	62	2659	45.6	-10 59	9.8	10.8	K	1	..	19016b
13	6486	45.3	-26 43	9.6	9.2	F5	2	..	18994b	63	2702	45.6	-12 22	9.4	9.7	Fo	1	..	19016b
14	6855	45.3	-30 34	7.64	8.4	F5	7	..	18994b	64	7797	45.6	-23 34	8.0	9.3	K2	3	..	18994b
15	6854	45.3	-30 51	9.0	8.7	A2	4	..	18994b	65	7453	45.6	-24 12	8.6	8.6	Ao	5	..	18994b
16	6577	45.3	-31 25	10.3	10.1	A	1	..	40081b	66	6862	45.6	-30 8	9.65	9.6	A2	2	..	18994b
17	5465	45.3	-33 28	10.6	9.9	Ao	1	..	40081b	67	6585	45.6	-31 33	9.6	10.2	K2	1	..	40081b
18	4913	45.3	-38 41	9.9	9.7	Ao	1	..	13055b	68	5081	45.6	-35 28	9.3	10.1	K5	1	..	40081b
19	4830	45.3	-39 36	7.65	7.6	G5	5	..	13055b	69	4917	45.6	-38 30	8.6	7.9	A5	6	..	13055b
20	4380	45.3	-47 24	8.2	8.2	Fo	4	..	40296b	70	4541	45.6	-41 58	9.3	8.8	Fo	3	..	19156b
21	4119	45.3	-48 35	9.0	9.6	K5	1	..	40296b	71	3843	45.6	-49 21	8.8	8.7	Ao	3	..	39930b
22	997	45.3	-67 38	10.1	10.9	G5	2	..	21452b	72	3582	45.6	-50 51	9.4	9.3	F8	2	..	40275b
23	1649	45.4	+45 41	6.08	7.08	Ko	6	0.7	38639i	73	942	45.6	-64 35	8.6	9.0	F5	7	..	21452b
24	2161	45.4	+39 16	8.5	9.1	Go	2	..	37390i	74	74	45.6	-88 8	8.3	8.9	Go	4	..	22578b
25	1971	45.4	+38 16	8.6	9.6	K	1	..	37390i	75	276	45.7	+79 52	8.90	9.46	Go	3	..	37493i
26	1907	45.4	+34 34	9.1	9.9	G5	2	..	38634i	76	806	45.7	+62 57	7.8	8.4	Go	3	E	37517i
27	1779	45.4	+29 54	8.56	8.62	A2	2	..	38173i	77	2703	45.7	-12 29	10.0	11.0	Ko	1	..	19016b
28	1917	45.4	+15 43	6.29	6.85	Go	6	..	37617i	78	2704	45.7	-12 56	8.5	8.6	A2	7	..	19016b
29	2486	45.4	- 3 50	6.99	7.99	Ko	7	..	22652i	79	6622	45.7	-25 24	8.4	9.1	Ko	3	..	18994b
30	2468	45.4	- 5 9	8.95	9.73	G5	2	..	19226b	80	6819	45.7	-29 18	9.6	10.2	K2	1	..	18994b
31	2600	45.4	-16 52	8.8	9.9	K2	1	..	41219b	81	5766	45.7	-32 31	9.0	8.1	B8	8	..	40081b
32	6581	45.4	-31 43	9.6	10.4	K5	1	..	40081b	82	5473	45.7	-33 9	8.9	9.6	A2	2	..	40081b
33	4534	45.4	-41 53	10.6	9.7	Ao	1	..	19156b	83	5296	45.7	-34 29	8.1	10.1	K5	2	..	40081b
34	4381	45.4	-47 23	8.0	7.9	B5	4	..	40296b	84	5070	45.7	-36 36	7.9	8.3	Fo	6	0.2	40081b
35	4120	45.4	-48 51	7.8	8.4	Ko	3	..	39930b	85	5161	45.7	-37 35	8.9	9.2	A5	3	..	13055b
36	3838	45.4	-49 10	9.4	9.5	Ko	1	..	39930b	86	4670	45.7	-43 33	8.5	9.0	K2	2	..	19156b
37	3835	45.4	-49 26	9.0	8.3	A2	4	..	39930b	87	4581	45.7	-45 17	8.8	8.7	Fo	5	..	40296b
38	1907	45.4	-53 13	8.4	8.3	Ao	5	..	40275b	88	1725	45.7	-57 18	7.3	8.6	K2	3	..	41151b
39	1909	45.4	-53 26	8.9	8.9	B9	3	..	40275b	89	839	45.7	-69 4	9.0	9.1	A2	2	..	24527b
40	1121	45.4	-59 16	8.3	8.3	A3	4	..	41151b	90	538	45.7	-74 25	6.56	8.4	K2	3	..	24452b
41	1038	45.4	-63 27	8.0	8.0	Ao	5	..	13025b	91	539	45.7	-76 42	7.9	7.9	Ao	3	..	24452b
42	941	45.4	-64 53	9.0	10.4	Mb	3	..	21452b	92	1973	45.8	+38 19	8.9	9.2	Fo	2	..	37390i
43	1025	45.4	-65 40	10.4	10.9	F8	1	..	21452b	93	1927	45.8	+21 6	9.5	9.5	Ao	4	..	10654m
44	297	45.5	+78 32	7.40	7.68	Fo	8	..	37714i	94	2063	45.8	+18 37	9.5	10.6	K2	1	..	10654m
45	2228	45.5	+20 41	9.5	9.6	A5	2	..	37617i	95	2062	45.8	+18 28	9.3	10.1	G5	2	..	10654m
46	2658	45.5	-10 46	8.5	9.5	Ko	3	..	19016b	96	2075	45.8	- 0 17	8.58	9.08	F8	2	..	37654i
47	5970	45.5	-27 54	7.32	7.1	Ao	8	..	18994b	97	2709	45.8	- 3 7	9.1	9.2	A2	3	..	19226b
48	5468	45.5	-33 59	10.3	10.2	A	1	..	40081b	98	2471	45.8	- 4 33	9.0	10.0	Ko	4	..	19226b
49	4668	45.5	-43 23	7.5	7.2	B5	7	..	19156b	99	2470	45.8	- 5 1	8.80	9.08	Fo	4	..	19226b
50	3841	45.5	-49 22	8.8	8.6	Ao	3	..	39930b	100	2669	45.8	-14 14	7.8	7.9	A2	7	..	19016b



## ANNALS OF HARVARD COLLEGE OBSERVATORY.

75600

8<sup>h</sup> 45<sup>m</sup>.8

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	2670	45.8	-15 5	9.8	10.1	F2	2	..	19016b	51	5773	46.1	-32 55	10.1	10.2	A0	1	..	40081b
2	2605	45.8	-15 26	9.8	10.2	F5	1	..	19016b	52	5092	46.1	-35 19	9.9	10.4	K0	1	..	40081b
3	2604	45.8	-15 42	9.2	10.2	K0	1	..	19016b	53	5072	46.1	-36 15	7.09	8.0	F5	3	0,7	42246b
4	5975	45.8	-27 33	9.3	9.1	A5	3	..	18994b	54	4925	46.1	-38 47	6.30	6.8	A2	5	..	42246b
5	5770	45.8	-32 25	5.23	7.0	G5	..	..	56,126	55	4549	46.1	-41 22	8.6	7.6	B8	5	..	19156b
6	4836	45.8	-39 13	9.9	9.2	A2	2	..	13055b	56	4547	46.1	-41 30	9.9	9.2	A5	2	..	19156b
7	4543	45.8	-41 12	9.3	8.6	B5	3	..	19156b	57	4684	46.1	-42 28	7.8	7.2	B8	6	..	19156b
8	4676	45.8	-43 1	7.3	6.9	B8	6	..	19156b	58	4393	46.1	-47 7	8.6	7.8	B3	4	..	40296b
9	4626	45.8	-46 11	9.1	8.7	F0	4	..	40296b	59	3591	46.1	-50 59	9.4	9.1	A2	3	..	40275b
10	4388	45.8	-47 19	10.0	9.3	A0	2	..	40296b	60	1684	46.1	-52 44	8.0	8.4	A0	5	..	40275b
11	1834	45.8	-55 5	7.56	7.3	A0	2	..	42241b	61	1914	46.1	-53 54	8.6	8.8	B3	3	..	40275b
12	825	45.8	-70 18	9.2	10.4	K5	1	..	21452b	62	841	46.1	-68 31	9.3	10.3	K0	2	..	21452b
13	749	45.8	-71 35	9.0	9.1	A3	2	..	24527b	63	1832	46.2	+29 14	8.1	9.2	K2	2	..	38173i
14	538	45.9	+70 30	8.6	9.6	K0	1	..	38602i	64	2078	46.2	+2 36	8.4	8.5	A5	3	..	37654i
15	1199	45.9	+59 15	8.0	8.5	F8	4	..	37705i	65	2647	46.2	-5 52	8.0	9.0	K0	7	..	19226b
16	1343	45.9	+52 44	6.99	7.41	F5	7	..	37705i	66	2695	46.2	-13 18	8.6	8.9	F0	7	..	19016b
17	1974	45.9	+38 4	9.9	10.0	A2	1	..	37390i	67	2607	46.2	-15 41	8.1	8.1	A0	7	..	19016b
18	2064	45.9	+18 7	8.0	8.8	G5	2	..	37617i	68	2697	46.2	-20 43	8.4	8.6	B9	5	..	41219b
19	2132	45.9	+8 42	8.0	9.0	K0	2	..	37628i	69	6607	46.2	-28 30	7.54	8.2	A3	7	..	18994b
20	2183	45.9	+0 51	7.64	7.64	A0	4	..	37654i	70	6614	46.2	-28 55	8.4	9.7	K5	2	..	18994b
21	2646	45.9	-5 59	9.2	10.4	K5	1	..	19226b	71	5479	46.2	-33 52	7.9	8.2	B9	5	..	40081b
22	2740	45.9	-6 41	8.8	9.1	F0	4	..	19226b	72	5095	46.2	-35 35	9.7	10.4	K5	1	..	40081b
23	2634	45.9	-7 43	8.6	9.0	F5	5	..	19226b	73	5074	46.2	-36 16	9.9	10.1	K5	1	..	40081b
24	2473	45.9	-11 58	9.4	10.5	K2	1	..	19016b	74	4842	46.2	-40 1	8.35	8.6	F0	3	..	13055b
25	2694	45.9	-13 57	9.0	10.0	K0	2	..	19016b	75	4397	46.2	-47 49	9.8	9.0	F0	2	..	40296b
26	2606	45.9	-15 26	9.2	10.2	K0	3	..	19016b	76	4399	46.2	-47 59	8.4	9.0	K2	3	..	40296b
27	2544	45.9	-19 25	9.2	9.5	A3	1	..	41219b	77	3856	46.2	-49 57	8.38	9.0	K0	3	..	40275b
28	2694	45.9	-20 46	8.0	8.3	B9	6	..	41219b	78	1685	46.2	-52 33	9.0	9.0	A0	2	..	40275b
29	6600	45.9	-29 5	5.98	7.9	G5	..	5,10	56,126	79	1732	46.2	-57 8	8.7	9.2	Ma	1	..	41151b
30	4838	45.9	-39 57	5.41	5.3	A2	..	0,7	56,126	80	1028	46.3	+62 33	8.0	8.4	F5	2	..	38603i
31	4677	45.9	-42 39	9.2	8.2	A2	3	..	19156b	81	2163	46.3	+39 46	8.87	9.65	G5	2	..	37390i
32	482	46.0	+71 11	8.6	9.7	K2	1	R	38602i	82	2003	46.3	+25 31	8.5	8.9	F5	2	..	38630i
33	1260	46.0	+54 7	8.4	8.7	F0	3	..	37705i	83	1999	46.3	+24 41	8.46	8.52	A2	3	..	38173i
34	1938	46.0	+42 41	9.9	11.0	K2	1	..	38639i	84	2229	46.3	+20 11	9.5	10.5	K0	4	..	10654m
35	1879	46.0	+36 39	8.3	9.3	K0	2	..	37390i	85	2147	46.3	-1 13	8.6	9.1	F8	1	..	22652b
36	1910	46.0	+34 28	8.8	9.2	F5	3	..	38634i	86	2648	46.3	-5 24	8.6	8.9	F2	6	..	19226b
37	1781	46.0	+30 13	6.98	7.98	K0	5	..	38173i	87	2650	46.3	-5 54	9.8	10.4	G	1	..	19226b
38	1925	46.0	+12 29	7.8	8.1	F0	4	..	37628i	88	2741	46.3	-6 36	9.8	10.2	F5	1	..	19226b
39	2184	46.0	+1 43	9.1	10.1	K	1	..	37654i	89	2501	46.3	-9 3	7.6	7.9	F0	6	..	19226b
40	5301	46.0	-34 24	8.3	10.4	K5	1	..	40081b	90	2417	46.3	-22 51	8.6	9.2	A0	3	..	13144b
41	5302	46.0	-34 36	9.0	10.0	F8	2	..	40081b	91	5986	46.3	-27 21	4.19	5.7	K2	..	R	28,202
42	4546	46.0	-41 23	9.3	8.5	A0	3	..	19156b	92	5984	46.3	-28 1	8.0	9.7	K5	1	..	18994b
43	1728	46.0	-57 52	8.1	8.5	K2	3	..	41151b	93	6617	46.3	-28 39	8.8	8.8	A0	3	..	18994b
44	998	46.0	-67 50	9.6	10.0	F5	3	..	21452b	94	5170	46.3	-37 29	9.3	9.2	A2	2	..	13055b
45	1831	46.1	+29 31	8.06	8.14	A3	3	..	38173i	95	961	46.3	-69 44	9.9	10.2	F0	2	..	21452b
46	1855	46.1	+26 5	7.51	8.51	K0	3	..	38173i	96	382	46.4	+74 23	8.1	8.9	G5	3	..	37714i
47	6631	46.1	-25 24	9.3	9.2	G0	2	..	18994b	97	1178	46.4	+57 39	8.4	9.2	G5	3	..	37705i
48	5980	46.1	-27 17	10.3	9.4	A3	2	..	18994b	98	1770	46.4	+32 51	5.75	5.83	A3	..	1,9 R	56,85
49	6610	46.1	-28 14	5.99	6.1	B9	..	0,10	56,126	99	2113	46.4	+19 17	8.6	9.6	K0	3	..	10654m
50	6827	46.1	-30 3	7.52	8.1	A0	8	..	18994b	100	1927	46.4	+12 15	7.8	8.8	K0	3	..	37628i

## THE HENRY DRAPER CATALOGUE.

75700

8<sup>h</sup> 46<sup>m</sup>.4

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1889	46.4	+10 45	9.1	9.4	F	2	..	37628i	51	2079	46.7	- 0 39	9.1	9.2	A2	1	..	22652b
2	2503	46.4	- 8 35	9.1	9.6	F8	1	..	19226b	52	2476	46.7	- 4 39	9.4	10.6	K5	2	..	19226b
3	2476	46.4	-11 56	9.8	10.1	Fo	2	..	19016b	53	2507	46.7	- 8 44	9.2	10.2	K	1	..	19226b
4	2696	46.4	-13 22	7.20	7.20	Ao	8	..	19016b	54	2420	46.7	-22 31	9.2	9.8	A	1	R	13144b
5	2675	46.4	-14 43	9.2	9.8	Go	2	..	19016b	55	2419	46.7	-22 40	8.4	9.6	K5	2	..	13144b
6	5987	46.4	-27 44	8.8	9.5	K5	2	..	18994b	56	6500	46.7	-26 34	9.1	9.1	Ao	3	..	18994b
7	6832	46.4	-29 23	8.4	9.0	F5	4	..	18994b	57	4558	46.7	-41 21	8.9	9.1	B8	4	..	19156b
8	5077	46.4	-36 18	7.8	8.7	Ko	4	0,1	40081b	58	4559	46.7	-41 32	8.9	8.9	B8	2	..	19156b
9	4862	46.4	-44 31	9.6	9.1	Fo	2	..	19156b	59	4560	46.7	-41 43	6.10	5.8	B2	4	E	4947b
10	4861	46.4	-44 57	5.02	5.08	A2	..	0,9 R	28,202	60	4873	46.7	-44 58	9.19	9.4	A2	3	..	19156b
11	1892	46.4	-56 52	8.6	9.2	Ko	2	..	41151b	61	4413	46.7	-47 9	8.5	8.7	Fo	3	..	40296b
12	1135	46.4	-59 35	7.9	9.2	Ko	2	..	41151b	62	1736	46.7	-57 19	8.3	8.5	G5	3	..	41151b
13	1207	46.4	-60 16	8.3	9.1	A2	4	..	41151b	63	999	46.7	-67 14	9.0	10.2	K5	3	..	21452b
14	1026	46.4	-65 40	10.4	11.0	G	1	R	21452b	64	712	46.8	+63 51	8.0	8.8	G5	2	..	37517i
15	490	46.5	+68 51	8.2	9.2	Ko	2	..	38602i	65	1261	46.8	+54 41	8.91	9.33	F5	2	..	37705i
16	1659	46.5	+28 38	6.31	7.66	Ma	6	..	38173i	66	1893	46.8	+10 14	8.4	9.0	Go	2	..	37628i
17	2004	46.5	+13 46	8.8	9.1	F2	4	..	37628i	67	2134	46.8	+ 8 26	6.59	7.15	Go	6	..	37628i
18	1931	46.5	+11 30	7.54	8.54	Ko	4	..	37628i	68	2073	46.8	+ 4 51	7.26	7.32	A2	8	..	37654i
19	2079	46.5	+ 1 53	8.4	9.0	Go	2	..	37654i	69	2076	46.8	+ 3 24	8.93	9.35	F5	2	..	37654i
20	2504	46.5	- 8 45	7.84	8.91	K2	5	..	19226b	70	2744	46.8	- 6 24	8.2	8.2	Ao	8	..	19226b
21	6636	46.5	-25 45	7.51	8.6	G5	6	..	18994b	71	2508	46.8	- 8 36	9.2	10.2	K	1	..	19226b
22	5098	46.5	-35 34	6.87	7.4	B9	6	1,9	42246b	72	2665	46.8	-11 5	9.1	9.5	F5	2	..	19016b
23	4661	46.5	-40 41	9.0	9.4	A5	1	..	19156b	73	2479	46.8	-11 51	9.4	10.2	G5	1	..	19016b
24	4554	46.5	-41 44	7.9	7.3	B3	7	..	19156b	74	2677	46.8	-15 1	8.21	9.56	Ma	3	..	19016b
25	4691	46.5	-42 12	8.5	8.2	Ko	3	..	19156b	75	2548	46.8	-20 9	7.98	8.6	F8	6	..	41219b
26	4680	46.5	-43 9	10.2	9.6	Ao	1	..	19156b	76	5784	46.8	-32 52	9.2	9.0	F8	3	..	40081b
27	4408	46.5	-48 0	8.9	10.1	K5	1	..	40296b	77	4654	46.8	-46 7	10.2	9.6	A2	1	R	40296b
28	1102	46.5	-63 4	8.8	9.8	Ko	1	..	13025b	78	1847	46.8	-54 30	9.2	9.2	Ao	2	..	40275b
29	541	46.5	-76 27	9.5	9.9	F5	4	0,3	21453b	79	1043	46.8	-63 30	9.5	9.5	Ao	3	..	21452b
30	2117	46.6	+40 40	8.2	9.3	K2	3	..	37390i	80	916	46.8	-66 59	9.8	10.9	K2	1	..	21452b
31	1886	46.6	+35 8	7.83	8.83	Ko	4	..	38634i	81	1940	46.9	+42 22	8.4	9.6	K5	1	..	38639i
32	1660	46.6	+28 43	6.06	7.06	Ko	8	R	38173i	82	1919	46.9	+37 26	7.18	7.74	Go	5	..	37390i
33	2714	46.6	- 2 54	8.1	9.1	Ko	4	0,4	19226b	83	1784	46.9	+30 20	7.56	8.63	K2	4	..	38173i
34	2474	46.6	- 4 17	8.1	8.4	F2	5	..	22652b	84	2007	46.9	+13 36	8.2	9.0	G5	4	..	37628i
35	2475	46.6	- 5 2	8.55	8.83	Fo	5	..	19226b	85	2043	46.9	+ 7 18	8.6	9.6	K	1	E	37654i
36	2651	46.6	- 5 36	8.6	9.0	F5	7	..	19226b	86	2509	46.9	- 8 45	8.2	8.6	F5	6	..	19226b
37	2743	46.6	- 6 49	5.60	5.66	A2	..	..	56,85	87	5788	46.9	-33 4	8.3	10.1	K5	2	..	40081b
38	2676	46.6	-14 58	9.4	10.2	G5	1	..	19016b	88	5089	46.9	-36 34	8.3	9.5	K5	3	..	40081b
39	2610	46.6	-21 59	7.6	9.2	Ko	3	..	13144b	89	4701	46.9	-42 57	8.0	8.5	K5	3	..	19156b
40	6639	46.6	-25 59	10.1	9.2	B9	3	..	18994b	90	4875	46.9	-44 21	7.9	8.5	G5	4	..	19156b
41	5780	46.6	-32 42	8.4	9.3	K2	3	..	40081b	91	3263	46.9	-51 43	9.8	9.9	F2	2	..	40275b
42	5317	46.6	-34 36	9.9	10.1	A3	2	..	40081b	92	1923	46.9	-53 39	8.4	8.3	Ao	5	..	40275b
43	5173	46.6	-37 57	8.6	8.6	B8	2	..	42246b	93	1849	46.9	-54 50	8.9	8.6	Ao	2	..	41151b
44	4411	46.6	-47 16	10.2	9.1	B8	2	..	40296b	94	1788	46.9	-55 48	8.5	8.5	Fo	3	..	41151b
45	1692	46.6	-52 7	8.8	9.6	G5	1	..	40275b	95	946	46.9	-65 4	7.40	8.7	Ko	8	..	21452b
46	1734	46.6	-57 13	8.3	9.1	G5	1	..	41151b	96	963	46.9	-70 0	9.7	10.0	Fo	3	..	21452b
47	378	46.6	-78 43	6.12	6.4	A5	..	2,8	56,126	97	126	47.0	+85 57	8.24	9.24	Ko	3	..	37546i
48	353	46.7	+75 20	8.97	9.97	K	2	..	37714i	98	1157	47.0	+58 32	8.8	9.6	G5	1	..	37705i
49	1156	46.7	+58 15	9.0	9.1	A5	2	..	37705i	99	1901	47.0	+31 28	9.2	9.8	Go	2	..	38634i
50	2114	46.7	+19 44	8.35	8.23	B5	3	..	37617i	100	2069	47.0	+18 34	7.18	7.46	Fo	6	..	37617i

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

75800

8<sup>h</sup> 47<sup>m</sup>.0

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	2637	m. 47.0	° 7 14	8.6	9.6	Ko	3	..	19226b	51	4711	m. 47.3	° 42 41	10.2	9.5	Ao	1	..	19156b
2	2480	47.0	-11 33	9.2	9.5	Fo	4	..	19016b	52	1855	47.3	-54 43	7.9	8.2	A2	4	..	41151b
3	2608	47.0	-15 27	9.8	9.8	A	2	..	19016b	53	1212	47.3	-60 15	8.65	8.8	B9	4	..	41151b
4	2609	47.0	-15 32	9.2	9.3	A2	6	..	19016b	54	536	47.3	-75 32	8.7	9.2	F8	5	0,3-	21453b
5	5094	47.0	-36 29	8.9	9.2	F8	3	..	40081b	55	1179	47.4	+57 48	8.2	8.2	B9	5	..	37705i
6	5095	47.0	-36 45	9.3	8.9	Ao	4	..	40081b	56	2653	47.4	-5 56	9.1	9.4	Fo	5	..	19226b
7	5092	47.0	-36 55	7.9	8.9	K2	4	..	40081b	57	2611	47.4	-16 32	8.4	9.2	G5	4	..	41219b
8	5184	47.0	-37 29	9.2	9.2	Ao	3	..	13055b	58	5120	47.4	-35 51	10.1	9.8	Ao	1	..	40081b
9	5182	47.0	-37 53	9.3	9.5	F5	2	..	13055b	59	5119	47.4	-36 5	9.3	10.1	K5	1	..	40081b
10	3874	47.0	-49 34	7.3	7.9	Fo	6	..	40296b	60	4691	47.4	-43 23	7.4	8.1	Bo	3	..	19156b
11	2074	47.1	+5 42	6.16	6.24	A3	10	..	37654i	61	4624	47.4	-45 44	9.4	9.3	Fo	2	..	40296b
12	2652	47.1	-5 33	10.3	10.6	Fo	2	..	19226b	62	949	47.4	-64 58	9.26	9.9	Ko	3	..	21452b
13	2639	47.1	-7 33	8.6	9.1	F8	4	..	19226b	63	845	47.4	-68 18	8.0	9.1	K2	2	..	24527b
14	2668	47.1	-10 46	8.5	8.9	F5	5	..	19016b	64	1966	47.5	+17 45	6.82	7.16	F2	6	..	37617i
15	2481	47.1	-12 6	9.4	10.4	Ko	1	..	19016b	65	2641	47.5	-7 21	8.6	9.4	G5	4	..	19226b
16	6633	47.1	-28 35	10.5	9.1	A2	3	..	18994b	66	2672	47.5	-10 53	8.8	9.9	K2	2	..	19016b
17	6805	47.1	-31 2	9.6	10.1	K5	1	..	40081b	67	2713	47.5	-12 58	9.2	10.0	G5	2	..	19016b
18	5495	47.1	-34 3	7.9	7.8	B9	8	..	40081b	68	2681	47.5	-14 41	9.2	10.2	Ko	1	..	19016b
19	4708	47.1	-42 48	10.2	9.1	A2	4	..	19156b	69	4945	47.5	-38 16	6.67	6.9	B3	..	0,5	56,126
20	4613	47.1	-45 53	9.8	8.7	Ao	5	..	40296b	70	4866	47.5	-39 23	7.5	7.3	B8	2	..	42246b
21	4661	47.1	-46 10	4.89	4.65	Bo	..	2,6 R	28,202	71	4576	47.5	-41 18	8.6	7.5	B5	6	..	19156b
22	4421	47.1	-47 26	9.6	8.5	B8	3	..	40296b	72	4693	47.5	-44 3	9.8	9.3	B9	1	..	19156b
23	4146	47.1	-48 13	8.9	9.0	F8	3	..	40296b	73	4625	47.5	-45 57	9.1	9.1	A2	3	..	40296b
24	3602	47.1	-50 14	8.22	8.7	Go	5	..	40275b	74	3267	47.5	-51 32	7.7	9.0	K2	5	..	40275b
25	1929	47.1	-53 54	9.2	9.2	Ao	2	..	40275b	75	1860	47.5	-54 6	9.7	9.7	A	1	..	40275b
26	947	47.1	-64 51	9.9	9.9	Ao	2	..	21452b	76	1796	47.5	-55 48	9.1	9.2	G5	2	..	40275b
27	964	47.1	-69 30	10.2	10.3	A5	2	..	21452b	77	950	47.5	-64 46	9.9	10.7	G5	2	..	21452b
28	1902	47.2	+31 21	9.2	10.0	G5	2	..	38634i	78	381	47.5	-78 30	9.6	10.8	K5	1	..	21453b
29	2231	47.2	+20 19	9.6	10.2	Go	2	..	10654m	79	1084	47.6	+61 32	8.6	9.6	Ko	2	..	37517i
30	2478	47.2	-4 30	9.4	9.9	F8	2	..	19226b	80	2076	47.6	+9 35	8.4	9.0	Go	2	..	37628i
31	2710	47.2	-12 55	9.4	10.4	Ko	1	..	19016b	81	2714	47.6	-12 26	6.88	7.44	Go	7	..	19016b
32	2701	47.2	-20 13	8.68	8.9	Ao	5	..	41219b	82	6514	47.6	-26 40	9.6	9.4	Fo	2	..	18994b
33	6846	47.2	-29 59	9.70	9.4	A3	3	..	18994b	83	6640	47.6	-28 42	9.6	9.2	Ao	3	..	18994b
34	5497	47.2	-33 38	9.2	10.1	K5	1	..	40081b	84	6904	47.6	-30 47	7.5	8.1	Ao	7	..	18994b
35	4672	47.2	-40 40	8.9	9.2	F5	3	..	19156b	85	5335	47.6	-34 42	9.3	9.5	Ao	3	..	40081b
36	4709	47.2	-42 18	9.6	8.6	A3	2	..	19156b	86	5125	47.6	-35 42	9.7	10.1	Ko	1	..	40081b
37	4616	47.2	-45 41	8.9	9.6	K5	1	..	40296b	87	4432	47.6	-47 30	9.8	9.0	Ao	1	..	40296b
38	543	47.2	-76 28	9.2	10.4	K5	2	..	21453b	88	4430	47.6	-47 31	8.3	8.4	Fo	3	..	40296b
39	284	47.2	-81 12	10.1	10.1	A	1	..	20869b	89	3880	47.6	-49 27	8.5	8.5	A3	5	..	40296b
40	1458	47.3	+51 37	9.0	9.3	Fo	2	..	38625i	90	1092	47.6	-61 15	8.3	8.8	Ao	3	..	13026b
41	1931	47.3	+21 31	10.3	11.3	Ko	1	..	10654m	91	951	47.6	-64 26	8.4	8.7	F2	7	..	21452b
42	1840	47.3	+16 45	8.2	9.0	G5	3	..	37617i	92	846	47.6	-69 0	8.3	9.4	K2	1	..	24527b
43	2675	47.3	-17 14	9.6	9.7	A2	1	..	41219b	93	544	47.6	-76 43	6.87	7.1	Ao	6	..	24452b
44	7489	47.3	-24 24	9.0	9.1	Ao	4	..	18994b	94	1291	47.7	+53 11	7.35	7.33	B9	6	0,7	38625i
45	6656	47.3	-25 50	7.66	8.8	K5	5	..	18994b	95	2164	47.7	+39 38	7.42	7.76	F2	6	..	37390i
46	6613	47.3	-31 9	10.3	9.9	Ko	1	..	40081b	96	1883	47.7	+35 56	6.02	6.08	A2	8	..	37390i
47	5118	47.3	-35 26	10.6	10.1	Ao	1	..	40081b	97	1892	47.7	+35 14	8.1	8.5	F5	5	..	38634i
48	5186	47.3	-37 51	9.9	9.5	Ao	2	..	13055b	98	1776	47.7	+33 26	8.1	8.7	Go	4	..	38634i
49	4673	47.3	-40 40	9.9	9.7	F	1	..	19156b	99	2119	47.7	+19 42	7.90	9.08	K5	2	..	37617i
50	4574	47.3	-41 35	9.3	8.6	B9	4	..	19156b	100	1897	47.7	+10 32	8.4	9.0	Go	2	..	37628i

## THE HENRY DRAPER CATALOGUE.

75900

8<sup>h</sup> 47<sup>m</sup>.7

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	2052	47.7	+ 6 34	8.6	8.9	F	2	E	37654i	51	6013	48.0	-27 47	9.1	9.1	A3	4	..	18994b
2	2679	47.7	- 9 35	8.4	8.5	A2	5	..	19016b	52	6649	48.0	-28 47	9.0	8.5	Ao	5	..	18994b
3	6642	47.7	-29 5	8.0	8.9	F5	5	..	18994b	53	4878	48.0	-39 38	8.9	9.2	Ko	2	..	13055b
4	6861	47.7	-29 49	8.8	9.3	F2	4	..	18994b	54	4728	48.0	-43 2	7.9	9.2	Ma	2	..	19156b
5	5193	47.7	-37 7	7.9	8.6	F2	5	..	40081b	55	4641	48.0	-45 15	7.79	8.1	Ao	6	0.7	19156b
6	4675	47.7	-46 20	10.0	9.6	Fo	2	..	40296b	56	1707	48.0	-52 28	9.7	9.7	A	1	..	40275b
7	1864	47.7	-54 14	8.6	9.7	K2	1	..	40275b	57	1032	48.0	-65 32	9.9	11.0	K2	1	..	21452b
8	1104	47.7	-62 8	7.9	8.2	F2	5	..	13026b	58	673	48.1	+64 59	5.62	6.40	G5	9	..	38603i
9	1029	47.7	-65 12	9.6	9.6	Ao	6	..	21452b	59	1907	48.1	+30 57	5.60	6.60	Ko	7	..	38173i
10	847	47.7	-68 24	9.5	9.5	Ao	4	..	21452b	60	1789	48.1	+30 30	8.8	9.2	F5	2	..	38173i
11	966	47.7	-70 3	8.32	9.4	K2	2	..	24527b	61	1937	48.1	+21 18	9.6	10.7	K2	1	E	10654m
12	750	47.7	-71 29	8.7	8.8	A5	3	..	24527b	62	1936	48.1	+11 32	8.6	9.1	F8	3	..	37628i
13	1589	47.8	+50 38	8.6	9.7	K2	1	..	38240i	63	2483	48.1	-11 20	8.0	8.8	G5	8	..	19016b
14	2412	47.8	+ 0 15	8.5	8.5	Ao	4	..	37654i	64	2688	48.1	-14 30	8.6	8.7	A3	5	..	19016b
15	2482	47.8	-11 34	9.6	10.2	Go	1	..	19016b	65	2689	48.1	-15 8	8.81	8.81	Ao	5	..	19016b
16	2716	47.8	-12 51	6.25	7.25	Ko	7	..	19016b	66	4707	48.1	-43 41	9.2	8.4	Ao	4	..	19156b
17	2700	47.8	-13 57	9.6	9.7	A3	2	..	19016b	67	4682	48.1	-46 10	8.2	9.0	Ma	2	..	40296b
18	2506	47.8	-18 14	7.43	7.85	F5	6	..	41219b	68	4683	48.1	-46 14	8.4	8.1	B8	6	..	40296b
19	2507	47.8	-19 8	8.8	9.8	K5	1	..	41219b	69	953	48.1	-64 23	9.0	10.2	K5	3	..	21452b
20	6009	47.8	-27 7	8.4	8.9	B9	4	..	18994b	70	1033	48.1	-65 44	9.6	10.2	Go	3	..	21452b
21	6008	47.8	-27 16	7.5	7.9	Fo	6	..	18994b	71	848	48.1	-69 4	10.2	10.3	A2	2	..	21452b
22	6646	47.8	-29 4	9.1	9.9	K2	1	..	18994b	72	587	48.2	+65 54	7.42	8.20	G5	4	..	37517i
23	5127	47.8	-36 1	10.1	10.1	Ao	1	..	40081b	73	1157	48.2	+60 43	7.7	8.7	Ko	2	..	37705i
24	5108	47.8	-36 32	10.1	10.4	A	1	..	40081b	74	2232	48.2	+20 21	6.82	7.32	F8	6	..	37617i
25	4584	47.8	-41 30	9.7	8.6	B5	3	..	19156b	75	1988	48.2	+14 47	8.09	8.07	B9	6	..	37628i
26	4723	47.8	-42 8	6.30	7.1	A2	2	E	4947b	76	1989	48.2	+14 14	7.04	7.12	A3	8	..	37628i
27	4700	47.8	-44 3	9.6	8.8	B9	2	..	19156b	77	2076	48.2	+ 5 36	8.8	8.8	A	1	..	37654i
28	3887	47.8	-49 15	9.8	9.6	A2	1	..	40296b	78	2064	48.2	+ 4 17	8.4	9.8	Ma	2	..	37654i
29	1105	47.8	-62 49	7.3	8.3	Ko	3	..	13025b	79	2497	48.2	- 3 47	8.8	10.0	K5	2	..	19226b
30	952	47.8	-64 6	9.3	9.3	Ao	4	..	21452b	80	2496	48.2	- 3 54	8.6	8.9	Fo	6	..	19226b
31	921	47.8	-66 45	10.1	10.7	Go	1	..	21452b	81	2675	48.2	-11 10	9.0	10.2	K5	2	..	19016b
32	827	47.8	-70 57	7.7	7.7	Ao	6	..	24527b	82	7501	48.2	-25 4	8.20	8.0	Ko	4	..	18994b
33	2119	47.9	+40 31	7.52	8.30	G5	6	..	37390i	83	6020	48.2	-27 51	8.2	9.4	K5	2	..	18994b
34	1894	47.9	+35 26	8.7	9.2	F8	4	..	38634i	84	5344	48.2	-34 51	8.6	9.5	Ko	2	..	40081b
35	1682	47.9	+27 18	8.7	9.7	Ko	2	..	38630i	85	5137	48.2	-35 12	9.15	9.5	K2	2	..	40081b
36	1899	47.9	+10 0	8.62	9.40	G5	3	..	37628i	86	5138	48.2	-35 22	9.7	10.1	A2	1	..	40081b
37	2136	47.9	+ 8 10	8.6	9.4	G5	1	..	38198i	87	5120	48.2	-36 18	9.9	10.1	K2	1	..	40081b
38	2082	47.9	+ 1 59	9.1	9.7	G	1	R	37654i	88	5201	48.2	-37 17	9.5	9.2	Ao	2	..	40081b
39	2720	47.9	-12 40	8.6	9.8	K5	2	..	19016b	89	4685	48.2	-40 37	6.56	6.4	B9	4	0.8	42246b
40	2719	47.9	-13 2	10.0	10.1	A2	2	..	19016b	90	4709	48.2	-43 22	9.8	9.0	Ao	2	..	19156b
41	2616	47.9	-15 23	7.55	7.55	Ao	9	..	19016b	91	4441	48.2	-47 12	10.0	8.8	B3	3	..	40296b
42	2677	47.9	-17 58	9.1	10.2	K2	1	..	41219b	92	542	48.2	-75 4	9.18	9.0	Ao	3	0.3	22237b
43	2555	47.9	-20 9	8.83	9.2	Ao	4	..	41219b	93	132	48.3	+85 6	8.2	8.5	Fo	5	..	37546i
44	2703	47.9	-21 7	8.2	9.2	K2	2	..	13144b	94	2076	48.3	+18 37	7.8	8.6	G5	2	..	37617i
45	6666	47.9	-25 10	9.4	9.4	Ao	2	..	18994b	95	2075	48.3	+17 55	7.12	7.12	Ao	6	..	37617i
46	5340	47.9	-35 0	9.2	10.1	Ko	1	..	40081b	96	2084	48.3	+ 2 17	8.4	9.5	K2	3	..	37654i
47	4679	47.9	-46 46	10.9	9.9	A	1	..	40296b	97	2647	48.3	- 7 21	9.2	10.0	G5	1	..	19226b
48	1943	47.9	-53 45	7.7	7.9	A2	7	..	40275b	98	2676	48.3	-10 56	9.8	10.6	G5	1	..	19016b
49	1798	48.0	+43 58	7.8	8.3	F8	6	..	38639b	99	2721	48.3	-12 50	9.2	10.2	Ko	2	..	19016b
50	6016	48.0	-27 23	9.3	9.5	G	1	..	18994b	100	6876	48.3	-29 30	8.32	9.3	K2	4	..	18994b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

76000

8<sup>h</sup> 48<sup>m</sup>.3

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	5814	48.3	-32 8	6.50	8.1	K <sub>2</sub>	..	0,7	56,126	51	2086	48.7	-0 12	8.68	8.82	A <sub>5</sub>	2	..	22652b
2	4963	48.3	-38 20	9.2	9.5	K <sub>5</sub>	2	..	13055b	52	2657	48.7	-5 32	8.8	9.4	Go	4	..	19226b
3	4687	48.3	-40 42	9.2	9.1	Ao	2	..	19156b	53	2678	48.7	-11 1	7.14	8.32	K <sub>5</sub>	7	..	19016b
4	4711	48.3	-43 47	6.68	6.7	B <sub>3</sub>	3	0,9	4947b	54	2691	48.7	-15 1	8.46	9.46	Ko	4	..	19016b
5	4169	48.3	-48 23	9.4	9.0	B <sub>8</sub>	2	..	40296b	55	6647	48.7	-31 59	9.1	9.7	K <sub>2</sub>	2	..	40081b
6	3899	48.3	-49 11	7.3	7.9	F <sub>8</sub>	5	..	40296b	56	5823	48.7	-32 12	7.9	9.0	K <sub>5</sub>	3	..	40081b
7	3617	48.3	-50 25	9.1	9.1	G <sub>5</sub>	2	..	40275b	57	5821	48.7	-32 16	9.0	9.0	F <sub>8</sub>	2	..	18894b
8	1712	48.3	-52 28	8.5	9.6	K <sub>5</sub>	1	..	40275b	58	5822	48.7	-32 36	9.2	9.9	K <sub>2</sub>	1	..	40081b
9	1792	48.4	+30 36	8.3	9.1	G <sub>5</sub>	2	..	38173i	59	5143	48.7	-35 43	10.1	10.1	Ao	1	..	40081b
10	1685	48.4	+27 18	7.16	8.34	K <sub>5</sub>	3	..	38173i	60	4653	48.7	-45 55	8.2	7.8	B <sub>8</sub>	7	..	40296b
11	2085	48.4	+3 27	var.	var.	Md	..	R	56,200	61	4177	48.7	-48 26	10.2	9.3	Ao	2	..	40296b
12	2655	48.4	-5 13	9.10	10.10	Ko	1	..	19226b	62	1720	48.7	-52 52	9.0	9.6	K <sub>2</sub>	1	..	40275b
13	2656	48.4	-5 50	7.8	8.8	Ko	5	..	19226b	63	1952	48.7	-53 26	9.1	9.1	Ao	2	..	40275b
14	2649	48.4	-7 20	8.6	8.6	Ao	7	..	19226b	64	1877	48.7	-54 19	9.0	8.6	Ao	2	E	41151b
15	6662	48.4	-28 37	8.0	9.8	K <sub>2</sub>	2	..	18994b	65	1154	48.7	-60 4	9.15	9.2	A	2	..	41151b
16	6880	48.4	-29 37	7.5	9.3	Ko	4	..	18994b	66	1035	48.7	-66 0	9.8	10.6	G <sub>5</sub>	3	..	21452b
17	6920	48.4	-30 48	8.0	9.3	K <sub>2</sub>	2	..	18994b	67	1181	48.8	+57 1	9.2	9.8	Go	2	..	37705i
18	4893	48.4	-39 23	8.7	9.7	Ko	1	..	13055b	68	1801	48.8	+44 34	8.9	9.4	F <sub>8</sub>	3	..	38639i
19	4688	48.4	-46 52	11.5	9.6	F <sub>5</sub>	1	..	40296b	69	1779	48.8	+33 8	7.8	7.8	Ao	5	..	38630i
20	1109	48.4	-62 22	8.8	8.9	A <sub>2</sub>	3	..	13026b	70	1900	48.8	+10 11	8.8	9.3	F <sub>8</sub>	2	..	37628i
21	954	48.4	-64 44	10.2	10.2	B <sub>9</sub>	2	..	21452b	71	5352	48.8	-34 43	9.3	9.2	A <sub>3</sub>	3	..	40081b
22	438	48.5	+73 28	8.0	8.6	Go	3	..	37714i	72		48.8	-36 10			F <sub>5</sub>			
23	484	48.5	+71 4	7.17	8.24	K <sub>2</sub>	5	..	38602i	73	5125	48.8	-36 10	6.54	6.8	A <sub>3</sub>	5	R	42246b
24	1942	48.5	+42 46	8.8	9.8	Ko	1	..	38639i	74	4718	48.8	-43 48	9.4	8.7	Ao	3	..	19156b
25	2014	48.5	+22 36	7.57	8.35	G <sub>5</sub>	6	..	10654m	75	1810	48.8	-55 55	8.9	9.9	Ko	1	..	40275b
26	2677	48.5	-10 51	9.1	10.2	K <sub>2</sub>	1	..	19016b	76	1111	48.8	-62 45	9.9	9.9	A	2	..	40096b
27	2618	48.5	-16 35	6.62	7.62	Ko	7	..	41219b	77	1158	48.9	+60 47	8.6	9.4	G <sub>5</sub>	1	..	37705i
28	6533	48.5	-26 34	8.8	9.3	Go	2	..	18994b	78	1292	48.9	+53 26	8.6	9.4	G <sub>5</sub>	2	..	38240i
29	6531	48.5	-27 5	9.6	9.0	F <sub>2</sub>	2	..	18994b	79	1784	48.9	+49 28	7.77	8.55	G <sub>5</sub>	3	..	38240i
30	6026	48.5	-27 52	10.5	10.4	Ao	2	..	18994b	80	1915	48.9	+34 12	9.6	10.4	G <sub>5</sub>	2	..	38634i
31	4716	48.5	-43 39	9.1	9.3	B	2	..	38418b	81	1992	48.9	+14 36	8.0	8.8	G <sub>5</sub>	4	..	37628i
32	1753	48.5	-57 24	8.0	9.2	K <sub>5</sub>	1	..	41151b	82	2087	48.9	-0 14	8.43	9.50	K <sub>2</sub>	2	..	22652b
33	850	48.5	-68 9	9.6	10.7	K <sub>2</sub>	1	..	21452b	83	2754	48.9	-6 14	9.2	10.2	Ko	3	..	19226b
34	849	48.5	-69 4	9.6	10.8	K <sub>5</sub>	1	..	21452b	84	2653	48.9	-7 16	9.4	9.5	A <sub>2</sub>	4	..	19226b
35	1805	48.6	+32 22	8.9	10.0	K <sub>2</sub>	1	..	38634i	85	2516	48.9	-8 34	9.2	9.3	A <sub>2</sub>	2	..	19226b
36	1939	48.6	+20 58	8.9	9.9	Ko	3	E	10654m	86	6036	48.9	-27 59	7.6	8.0	Ko	6	..	18994b
37	2138	48.6	+8 47	7.5	8.0	F <sub>8</sub>	5	..	37628i	87	6670	48.9	-28 30	9.1	10.1	A <sub>5</sub>	2	..	18994b
38	2056	48.6	+6 43	8.6	9.4	G <sub>5</sub>	3	E	37654i	88	6890	48.9	-29 28	8.8	9.6	F <sub>2</sub>	3	..	18994b
39	2066	48.6	+4 18	8.6	8.6	Ao	4	..	37654i	89	6653	48.9	-31 54	10.8	10.8	K <sub>5</sub>	1	..	40081b
40	2087	48.6	+2 53	8.44	9.00	Go	3	..	37654i	90	5354	48.9	-34 41	8.6	9.2	Ko	3	..	40081b
41	2752	48.6	-6 13	9.0	9.8	G <sub>5</sub>	3	..	19226b	91	4741	48.9	-42 23	9.6	9.1	A <sub>5</sub>	2	..	19156b
42	2681	48.6	-17 29	9.2	9.2	Ao	1	..	41219b	92	1156	48.9	-59 7	8.0	8.0	B <sub>9</sub>	5	1,2	41151b
43	2623	48.6	-21 44	7.6	8.3	F <sub>5</sub>	6	..	13144b	93	957	48.9	-64 24	9.6	9.6	Ao	3	..	21452b
44	6666	48.6	-28 40	9.6	9.5	F <sub>8</sub>	2	..	18994b	94	494	49.0	+69 38	8.89	8.97	A <sub>3</sub>	2	..	38602i
45	5525	48.6	-33 38	10.1	10.2	A	1	..	40081b	95	1865	49.0	+26 36	6.67	7.23	Go	5	..	38173i
46	4173	48.6	-48 24	9.4	9.1	F <sub>5</sub>	1	..	40296b	96	2658	49.0	-5 32	8.6	8.7	A <sub>5</sub>	5	..	19226b
47	1909	48.6	-56 42	8.6	8.6	B <sub>9</sub>	2	..	41151b	97	2756	49.0	-7 8	9.2	9.3	A <sub>2</sub>	3	..	19226b
48	924	48.6	-66 44	9.8	10.4	Go	1	..	21452b	98	2517	49.0	-9 3	9.2	9.3	A <sub>5</sub>	1	..	19016b
49	567	48.7	+67 40	8.9	9.2	F	2	..	37517i	99	2704	49.0	-13 28	8.5	9.5	Ko	2	..	19016b
50	2088	48.7	+2 12	7.16	7.44	Fo	8	..	37654i	100	2695	49.0	-15 0	8.91	9.41	F <sub>8</sub>	4	..	19016b

THE HENRY DRAPER CATALOGUE.

76100

8<sup>h</sup> 49<sup>m</sup>.0

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	2623	49.0	m. ° ' 15 23	10.3	10.7	F5	1	..	19016b	51	2490	49.3	m. ° ' 5 4	6.01	6.57	Go	10	..	19226b
2	2625	49.0	-16 58	7.34	7.76	F5	6	..	41219b	52	2660	49.3	-5 30	9.2	9.3	A3	2	..	19226b
3	2708	49.0	-21 4	9.1	8.9	A2	2	..	13144b	53	2488	49.3	-11 33	9.4	9.5	A2	2	..	19016b
4	2431	49.0	-22 37	8.0	8.3	B9	6	..	18994b	54	2696	49.3	-14 51	9.2	10.3	K2	1	..	19016b
5	7513	49.0	-24 51	8.0	9.0	Ko	3	..	18994b	55	2626	49.3	-15 13	7.91	8.98	K2	7	..	19016b
6	6038	49.0	-27 34	9.6	10.3	F5	2	..	18994b	56	2627	49.3	-15 44	9.2	9.3	A2	3	..	19016b
7	6934	49.0	-30 52	8.1	9.6	K2	2	..	18994b	57	2709	49.3	-20 37	8.2	8.9	F5	3	..	41219b
8	5128	49.0	-36 25	9.5	9.6	F8	2	..	40081b	58	5149	49.3	-35 18	9.9	10.0	Ko	1	..	40081b
9	5219	49.0	-37 51	11.3	9.6	A	1	..	13055b	59	4987	49.3	-38 13	9.5	10.3	Ko	1	..	39925b
10	4980	49.0	-38 21	5.82	7.1	Ma	..	0,3	56,126	60	4726	49.3	-43 23	8.3	8.5	Ko	4	..	19156b
11	4693	49.0	-40 37	7.5	8.8	Ko	3	..	19156b	61	4460	49.3	-47 59	6.11	6.0	B3	..	2,6-	56,126
12	3631	49.0	-50 47	9.8	9.3	Ao	2	..	40275b	62	1915	49.3	-56 55	7.9	8.0	A3	2	..	42241b
13	1759	49.0	-57 16	5.70	5.8	B8	..	0,8	56,126	63	1763	49.3	-58 0	8.2	8.5	F2	4	..	41151b
14	236	49.1	+83 34	8.6	9.2	Go	2	..	38331i	64	958	49.3	-64 41	8.7	8.7	B8	7	..	21452b
15	355	49.1	+75 50	8.62	9.62	Ko	3	..	37714i	65	1039	49.3	-65 25	9.3	10.1	G5	4	..	21452b
16	1658	49.1	+45 3	8.0	8.5	F8	3	..	38639i	66	928	49.3	-66 58	8.8	9.8	Ko	4	..	21452b
17	1944	49.1	+42 4	7.50	7.78	Fo	5	..	37390i	67	968	49.3	-69 46	9.2	10.2	Ko	2	..	21452b
18	1900	49.1	+35 30	7.8	8.8	Ko	4	..	38634i	68	969	49.3	-69 56	9.2	10.4	K5	1	..	21452b
19	2154	49.1	-2 7	9.17	9.67	F8	2	..	22652b	69	1182	49.4	+57 16	7.22	8.29	K2	4	..	37705i
20	2682	49.1	-10 20	9.8	9.9	A2	2	..	19016b	70	1700	49.4	+48 8	8.9	9.7	G5	2	..	38240i
21	2724	49.1	-12 54	8.6	9.2	Go	5	..	19016b	71	1804	49.4	+44 3	8.6	9.2	Go	5	..	38639i
22	2626	49.1	-16 50	8.2	8.5	Fo	5	..	41219b	72	2085	49.4	+8 57	9.1	9.2	A2	2	..	38198i
23	6657	49.1	-31 36	9.1	8.7	B9	6	..	40081b	73	2661	49.4	-5 40	8.6	9.4	G5	4	..	19226b
24	5531	49.1	-34 0	9.3	9.1	Ao	2	..	40081b	74	2518	49.4	-8 23	7.42	7.70	Fo	7	R	19226b
25	5356	49.1	-34 52	8.7	8.9	Ao	4	..	40081b	75	2518	49.4	-8 23	7.42	7.70	A2	7	R	19226b
26	5131	49.1	-36 55	8.9	8.7	A2	4	..	40081b	76	2685	49.4	-10 32	8.31	8.87	Go	5	..	19016b
27	5220	49.1	-37 50	9.3	8.9	F2	4	..	13055b	77	2558	49.4	-20 3	8.18	9.2	G5	4	..	41219b
28	4695	49.1	-41 3	7.9	9.2	K5	2	..	19156b	78	6689	49.4	-25 38	8.2	9.8	K5	2	..	18994b
29	4747	49.1	-42 7	10.0	9.2	Ao	1	..	19156b	79	5534	49.4	-33 53	9.3	9.9	A	1	..	40081b
30	1957	49.1	-53 13	9.4	9.4	Ao	1	..	40275b	80	5535	49.4	-34 2	9.7	9.7	A	1	..	40081b
31	1815	49.1	-55 26	6.8	6.9	B8	4	..	42241b	81	5361	49.4	-34 27	7.9	10.1	K2	2	..	40081b
32	2123	49.2	+40 26	8.2	8.7	F8	3	..	37390i	82	5150	49.4	-35 6	8.6	10.0	K5	1	..	40081b
33	1938	49.2	+11 11	8.8	8.9	A2	2	..	37628i	83	4727	49.4	-43 55	9.0	8.5	Ao	5	..	19156b
34	2088	49.2	+3 30	8.44	9.62	K5	2	..	37654i	84	4920	49.4	-45 4	9.34	9.4	Ao	1	..	19156b
35	2725	49.2	-12 28	9.8	10.1	Fo	1	..	19016b	85	4705	49.4	-46 58	9.1	9.1	Go	1	..	40296b
36	2434	49.2	-22 40	8.2	8.4	Ao	4	..	18994b	86	4707	49.4	-47 2	7.2	7.2	B9	8	..	40296b
37	4703	49.2	-46 39	10.2	9.3	Ao	2	..	40296b	87	1734	49.4	-52 57	7.4	7.8	Ao	7	..	40275b
38	4185	49.2	-48 7	8.9	8.2	B9	4	..	40296b	88	1224	49.4	-61 0	7.0	8.2	Go	5	..	41151b
39	3911	49.2	-49 15	9.4	9.3	Fo	2	..	40296b	89	1040	49.4	-65 15	9.90	10.4	Ko	3	..	21452b
40	3295	49.2	-51 22	9.1	10.2	K5	1	..	40275b	90	1803	49.5	+44 44	8.82	10.17	Ma	1	..	38639i
41	1960	49.2	-53 17	9.7	9.7	Ao	1	..	40275b	91	1805	49.5	+44 31	8.7	9.3	Go	2	..	38639i
42	1883	49.2	-54 27	8.7	8.8	Ao	2	E	41151b	92	1866	49.5	+26 48	7.14	7.14	Ao	4	..	38173i
43	927	49.2	-66 26	5.41	5.83	F5	..	3,10	56,126	93	2199	49.5	+1 20	8.4	9.2	G5	2	..	37654i
44	387	49.2	-78 30	9.0	9.6	Go	4	0,1 R	21453b	94	2491	49.5	-4 55	8.5	8.6	A5	3	..	19226b
45	1159	49.3	+60 36	8.4	8.5	A3	3	..	37705i	95	2520	49.5	-8 50	8.97	9.97	Ko	1	..	19016b
46	1203	49.3	+59 0	8.9	9.2	Fo	1	..	37705i	96	7520	49.5	-24 42	9.0	8.9	F8	3	..	18994b
47	1934	49.3	+15 9	8.4	8.5	A2	3	E	37628i	97	6946	49.5	-30 8	9.0	9.6	F5	2	..	18994b
48	2057	49.3	+5 51	7.7	8.9	K5	3	..	37654i	98	5153	49.5	-35 54	10.3	10.1	Ao	1	..	40081b
49	2095	49.3	+2 28	7.8	8.3	F8	2	..	37654i	99	5140	49.5	-36 28	10.6	10.1	A2	1	..	40081b
50	2489	49.3	-4 12	9.2	10.2	Ko	2	..	19226b	100	4712	49.5	-46 51	10.2	9.6	Ao	2	..	40296b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

76200

8<sup>h</sup> 49<sup>m</sup>.5

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	3636	49.5	-50 47	10.0	9.6	Ao	2	..	40275b	51	5545	49.8	-33 25	8.6	9.4	Ao	3	..	40081b
2	959	49.5	-64 17	9.9	10.2	Fo	2	..	21452b	52	5371	49.8	-34 53	9.9	9.5	F5	2	..	40081b
3	852	49.5	-68 7	10.5	10.6	A2	2	..	21452b	53	5156	49.8	-35 39	7.9	8.6	F2	5	..	40081b
4	851	49.5	-68 49	9.3	10.4	K2	2	..	21452b	54	5145	49.8	-36 32	8.6	9.2	Ao	4	..	40081b
5	298	49.5	-80 19	9.4	10.6	K5	1	..	22237b	55	5000	49.8	-39 3	9.2	9.2	B8	3	..	13055b
6	1088	49.6	+61 28	8.2	8.3	A3	5	..	37705i	56	4732	49.8	-43 23	9.4	8.2	B9	4	..	19156b
7	1855	49.6	+16 36	8.3	8.3	Ao	4	..	37617i	57	4713	49.8	-46 53	9.6	9.3	G5	1	..	40296b
8	2088	49.6	- 0 20	8.68	8.96	Fo	4	..	22652b	58	1115	49.8	-62 20	9.4	9.7	F2	2	..	40096b
9	2628	49.6	-15 34	9.6	10.0	F5	1	..	19016b	59	547	49.9	+68 50	9.2	9.8	G	1	..	38602i
10	5539	49.6	-34 5	9.9	9.9	A	1	..	40081b	60	2174	49.9	+39 12	7.9	8.9	Ko	4	..	37390i
11	4923	49.6	-45 0	9.54	9.3	Ao	2	..	19156b	61	1927	49.9	+36 50	7.8	8.6	G5	3	..	37345i
12	4193	49.6	-48 11	9.2	9.0	Ao	2	..	40296b	62	2093	49.9	+ 3 1	7.76	8.76	Ko	5	..	37654i
13	3637	49.6	-51 3	8.6	8.4	B9	5	..	40275b	63	6950	49.9	-30 52	7.5	9.0	K2	4	..	18994b
14	1890	49.6	-54 58	6.86	7.0	Ao	4	..	42241b	64	6673	49.9	-31 39	10.3	9.6	A2	3	..	40081b
15	960	49.6	-64 36	10.8	10.9	A5	1	..	21452b	65	5843	49.9	-32 56	10.3	9.7	Ao	1	..	40081b
16	1159	49.7	+58 36	6.90	6.96	A2	8	..	37705i	66	5237	49.9	-37 57	10.3	10.1	G	1	..	39925b
17	1299	49.7	+55 3	8.0	9.0	Ko	3	..	37705i	67	4706	49.9	-40 39	9.3	9.2	Ao	2	..	19156b
18	1888	49.7	+36 34	7.9	8.7	G5	4	..	37345i	68	4735	49.9	-43 58	7.9	7.1	Ao	8	..	19156b
19	1666	49.7	+28 19	5.25	6.03	G5	9	R	38173i	69	1042	49.9	-65 55	10.0	10.6	Go	2	..	21452b
20	2238	49.7	+20 4	9.6	10.8	K5p	..	R	M	70	747	49.9	-72 11	6.09	6.1	A2	8	..	24452b
21	1973	49.7	+17 37	var.	var.	Nb	2	2,OR	37607i	71	589	50.0	+66 23	7.22	7.50	Fo	7	..	37517i
22	2096	49.7	+ 2 24	8.0	9.0	Ko	2	..	37654i	72	1301	50.0	+55 14	7.76	8.26	F8	7	..	37705i
23	2759	49.7	- 6 59	9.1	10.1	Ko	3	..	19226b	73	2506	50.0	- 3 10	6.82	6.88	A2	9	..	22652b
24	6554	49.7	-26 8	7.9	8.6	G5	4	..	18994b	74	2658	50.0	- 7 26	7.8	7.9	A5	7	..	19226b
25	6556	49.7	-26 33	10.3	9.5	F5	2	..	18994b	75	2727	50.0	-13 1	9.6	10.8	K5	1	..	19016b
26	6050	49.7	-27 21	9.6	10.8	K	1	..	18994b	76	2439	50.0	-22 34	9.4	10.1	Ao	2	..	13144b
27	6909	49.7	-29 11	9.8	9.6	Fo	4	R	18994b	77	6560	50.0	-26 10	10.3	9.8	Fo	2	..	18994b
28	6912	49.7	-29 42	9.1	9.3	F2	4	..	18994b	78	6677	50.0	-31 47	7.25	8.7	Ko	8	..	40081b
29	5541	49.7	-34 1	8.9	9.9	Ko	1	..	40081b	79	6676	50.0	-31 55	10.5	9.9	A2	1	..	40081b
30	3303	49.7	-51 45	6.48	6.9	Ao	4	..	4985b	80	5160	50.0	-35 7	9.20	10.1	K5	1	..	40081b
31	1819	49.7	-55 39	9.1	9.1	A2	2	..	41151b	81	4921	50.0	-39 37	8.1	8.3	Fo	5	..	13055b
32	1822	49.7	-55 39	9.0	9.1	Go	2	..	40275b	82	4740	50.0	-43 10	8.2	7.4	Ao	7	..	19156b
33	1820	49.7	-55 52	7.0	7.1	B9	3	..	42241b	83	3308	50.0	-51 7	8.9	9.0	B9	4	..	40275b
34	1226	49.7	-61 3	7.3	7.6	B9	5	..	41151b	84	1894	50.0	-54 20	9.1	9.1	Ao	4	..	40275b
35	1114	49.7	-62 18	9.7	9.7	A	2	..	40096b	85	1054	50.0	-63 18	9.0	9.8	G5	2	..	21452b
36	352	49.7	-79 8	5.76	7.7	K2	..	0,6	56,126	86	931	50.0	-66 37	8.8	9.6	G5	5	..	21452b
37	353	49.7	-79 19	8.7	9.1	F5	3	..	22237b	87	756	50.0	-71 6	9.2	10.3	K2	1	E	21452b
38	1458	49.8	+46 9	6.93	7.21	Fo	7	..	38240i	88	545	50.0	-74 41	8.2	8.3	A2	2	..	24452b
39	1806	49.8	+44 38	8.6	9.4	G5	4	..	38639i	89	569	50.1	+67 28	8.9	9.5	Go	3	..	37517i
40	1904	49.8	+35 47	8.0	9.0	Ko	2	E	37345i	90	1460	50.1	+51 8	7.19	7.19	Ao	7	..	38240i
41	2074	49.8	+ 4 32	8.4	9.0	Go	3	..	37654i	91	1459	50.1	+46 1	5.92	6.92	Ko	7	..	38240i
42	2089	49.8	- 0 35	8.6	9.6	Ko	1	..	22652b	92	2125	50.1	+40 35	5.88	6.22	F2	8	..	37390i
43	2688	49.8	-11 0	6.84	8.02	K5	7	..	19016b	93	1996	50.1	+14 34	7.84	8.40	Go	3	..	37628i
44	2706	49.8	-14 8	9.4	10.2	G5	2	..	19016b	94	2060	50.1	+ 6 20	3.30	4.30	Ko	..	R	1802c
45	2687	49.8	-17 19	9.2	9.6	F5	1	..	41219b	95	2509	50.1	- 3 32	8.2	8.2	Ao	4	..	22652b
46	2515	49.8	-18 29	8.0	9.1	K2	1	..	41219b	96	2440	50.1	-23 9	7.32	8.0	Go	6	..	18994b
47	2630	49.8	-21 26	9.0	9.8	Ko	1	..	13144b	97	6698	50.1	-28 10	8.8	9.8	Ko	3	..	18994b
48	6694	49.8	-25 37	9.3	9.8	F5	2	..	18994b	98	6679	50.1	-31 32	9.6	9.1	F8	2	..	40081b
49	6052	49.8	-27 54	8.6	9.8	Ko	2	..	18994b	99	5374	50.1	-34 27	8.9	9.2	Ao	3	..	40081b
50	5840	49.8	-32 45	8.6	9.1	Ko	3	..	40081b	100	5161	50.1	-35 17	7.35	7.7	F5	2	3,7	42246b



## THE HENRY DRAPER CATALOGUE.

76300

8h 50m.1

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	5001	50.1	-38 12	9.3	8.5	B9	4	..	13055b	51	1941	50.5	+12 0	5.70	6.70	Ko	7	..	37628i
2	5004	50.1	-38 20	8.6	8.2	F8	4	..	13055b	52	2692	50.5	-11 0	6.75	6.75	Ao	9	R	19016b
3	4923	50.1	-39 56	8.3	8.9	K2	2	..	13055b	53	2493	50.5	-11 14	9.1	10.3	K5	1	..	19016b
4	4924	50.1	-40 4	6.46	7.1	Ko	9	R	13055b	54	2517	50.5	-18 26	7.8	8.6	G5	5	..	41219b
5	4931	50.1	-40 4	9.6	9.0	A5	3	..	19156b	55	6708	50.5	-25 11	8.55	8.4	A2	6	..	18994b
6	4472	50.1	-47 9	9.8	8.8	B9	3	..	40296b	56	5160	50.5	-36 39	10.3	9.6	Ao	1	..	40081b
7	1827	50.1	-55 37	8.5	9.1	Ko	2	..	41151b	57	4766	50.5	-43 3	8.2	8.9	K5	1	..	19156b
8	350	50.2	+77 19	9.2	10.0	G5	2	..	37714i	58	4933	50.5	-45 0	7.74	8.4	Ko	6	0.4	40296b
9	2021	50.2	+22 4	8.2	8.3	A2	3	..	38173i	59	4732	50.5	-46 48	9.2	8.5	Ao	5	..	40296b
10	2061	50.2	+5 57	7.7	8.8	K2	4	2.5	37654i	60	4480	50.5	-47 9	5.32	5.7	A5	..	5.6	56,126
11	2690	50.2	-10 36	7.66	8.66	Ko	5	..	19016b	61	1830	50.5	-56 2	8.6	9.1	A3	2	..	41151b
12	2708	50.2	-13 36	9.6	10.2	Go	1	..	19016b	62	810	50.6	+63 50	7.07	7.85	G5	4	..	38603i
13	2700	50.2	-14 44	8.6	8.6	B9	6	..	19016b	63	1787	50.6	+49 15	8.5	9.5	Ko	2	..	38240i
14	5552	50.2	-33 45	9.9	10.1	A	1	..	40081b	64	2025	50.6	+22 15	9.2	9.2	A	2	E	37607i
15	4712	50.2	-40 49	8.9	9.2	B9	2	..	19156b	65	2161	50.6	-1 37	8.8	9.3	F8	2	..	22652b
16	1118	50.2	-63 6	9.8	9.8	Ao	2	..	40096b	66	2737	50.6	-2 24	7.05	8.05	Ko	7	..	22652b
17	1869	50.3	+26 45	8.2	8.5	F2	2	..	38173i	67	2665	50.6	-5 20	9.4	10.6	K5	1	..	19226b
18	2046	50.3	+7 22	8.4	8.7	Fo	3	..	38198b	68	2666	50.6	-5 42	9.2	10.3	K2	1	..	19226b
19	2734	50.3	-2 22	9.4	9.5	A2	2	..	22652b	69	2661	50.6	-7 36	6.91	6.99	A3	..	I, R	56,85
20	2631	50.3	-15 24	7.20	8.20	Ko	8	..	19016b	70	2661	50.6	-7 36	6.67	6.75	A3	..	I, R	56,85
21	5165	50.3	-35 50	9.7	10.1	K5	1	..	40081b	71	2693	50.6	-9 32	8.30	8.64	F2	7	..	19226b
22	4616	50.3	-41 26	7.2	7.5	B9	7	..	19156b	72	2494	50.6	-11 42	9.4	10.4	Ko	2	..	19016b
23	4724	50.3	-46 7	10.5	9.3	A2	3	..	40296b	73	2730	50.6	-12 27	8.8	8.9	A2	3	..	19016b
24	4208	50.3	-48 42	8.9	9.0	A2	5	..	40296b	74	2729	50.6	-12 56	9.1	9.9	G5	1	..	19016b
25	3646	50.3	-50 46	9.2	9.1	B8	2	..	40275b	75	2711	50.6	-14 4	9.6	10.1	F8	2	..	19016b
26	3647	50.3	-50 54	8.9	9.1	F5	4	..	40275b	76	2691	50.6	-17 51	5.90	6.90	Ko	8	..	41219b
27	1258	50.3	-58 9	8.5	9.4	G5	1	..	41151b	77	2692	50.6	-17 52	7.14	8.21	K2	3	..	41219b
28	1043	50.3	-65 21	9.9	10.7	G5	2	..	21452b	78	7884	50.6	-24 1	8.8	9.3	K5	2	..	18994b
29	1005	50.3	-68 6	9.0	10.0	Ko	2	..	21452b	79	5558	50.6	-33 47	10.1	10.2	A	1	..	40081b
30	1785	50.4	+48 52	8.0	8.8	G5	2	..	38240i	80	4751	50.6	-43 8	7.3	7.5	K5	3	..	19156b
31	1845	50.4	+29 3	8.6	9.4	G5	2	..	38173i	81	1166	50.6	-59 28	7.7	8.0	Ao	4	0.2	41151b
32	2013	50.4	+24 51	6.72	7.06	F2	6	..	38173i	82	1120	50.6	-62 29	7.9	7.9	Ao	6	..	13026b
33	2735	50.4	-2 46	7.15	8.22	K2	6	..	22652b	83	1055	50.6	-63 11	9.8	9.8	Ao	2	..	13026b
34	2710	50.4	-13 40	10.0	10.3	Fo	1	..	19016b	84	812	50.7	+63 44	6.94	7.22	Fo	8	..	37517i
35	2516	50.4	-18 54	9.2	10.4	K5	1	..	41219b	85	1461	50.7	+51 32	8.7	9.8	K2	1	..	38240i
36	5555	50.4	-33 17	9.7	9.9	Fo	1	..	40081b	86	1889	50.7	+41 44	8.2	9.6	Ma	2	..	37390i
37	5380	50.4	-35 2	9.15	9.5	A3	3	..	40081b	87	1929	50.7	+37 39	8.0	8.1	A3	2	..	37345i
38	5166	50.4	-35 21	9.3	9.2	Ao	4	..	40081b	88	2095	50.7	+3 6	8.8	9.8	K	1	..	37654i
39	5167	50.4	-35 48	8.7	9.5	Ko	2	..	40081b	89	2495	50.7	-11 49	9.4	9.5	A2	3	..	19016b
40	4762	50.4	-42 7	7.2	7.3	B2	6	..	19156b	90	2713	50.7	-14 1	8.0	9.2	K5	4	..	19016b
41	4213	50.4	-48 25	9.4	9.3	Ao	2	..	40296b	91	2635	50.7	-15 46	8.6	9.0	F5	3	..	19016b
42	3930	50.4	-49 12	8.4	8.4	Ao	4	..	40296b	92	3654	50.7	-50 18	9.0	8.7	A2	5	..	40275b
43	3313	50.4	-51 42	10.0	9.6	Ao	2	..	40275b	93	1747	50.7	-52 11	8.8	8.8	Ao	4	..	40275b
44	3314	50.4	-52 5	9.0	9.0	B9	4	..	40275b	94	1750	50.7	-53 3	8.9	10.1	K5	1	..	40275b
45	1918	50.4	-56 17	6.03	6.6	B9	..	1.7	56,126	95	1056	50.7	-63 14	8.4	9.5	K2	2	..	13026b
46	540	50.5	+70 37	9.9	10.0	A2	1	..	38602i	96	1462	50.8	+51 49	8.8	..	R5	2	..	38240i
47	1807	50.5	+44 49	6.91	7.69	G5	4	0.3	38639i	97	1905	50.8	+35 24	7.23	8.23	Ko	4	..	37345i
48	1784	50.5	+33 39	7.26	7.82	Go	4	5.3	38634i	98	1785	50.8	+33 18	5.48	5.56	A3	..	I, 8 R	56,86
49	1858	50.5	+16 6	8.0	8.5	F8	6	..	5396m	99	2204	50.8	+1 16	7.8	8.8	Ko	3	..	37654i
50										100	2525	50.8	-8 46	var.	var.	Md	..	R	56,200

76400

8<sup>h</sup> 50<sup>m</sup>.8

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	2704	50.8	-14 14	8.6	8.9	Fo	5	..	19016b	51	2766	51.1	- 6 39	9.8	9.9	A2	2	..	19226b
2	7889	50.8	-23 20	10.1	9.8	F2	2	..	13144b	52	2638	51.1	-15 19	10.4	10.4	A	1	..	19016b
3	6064	50.8	-27 42	7.6	8.4	Ko	6	..	18994b	53	5393	51.1	-35 3	10.6	10.0	Ao	1	..	40081b
4	5561	50.8	-33 8	9.7	10.2	K5	1	..	40081b	54	5181	51.1	-35 51	10.3	9.8	Ao	1	..	40081b
5	5173	50.8	-35 8	8.35	9.2	K2	3	..	40081b	55	4496	51.1	-47 19	9.6	9.6	Ko	1	..	40296b
6	5172	50.8	-35 38	9.3	9.2	Ao	4	..	40081b	56	3938	51.1	-49 14	10.0	9.1	Ao	2	..	40296b
7	5019	50.8	-38 26	8.3	8.8	Ko	3	..	13055b	57	3658	51.1	-50 46	9.2	9.3	G5	2	..	40275b
8	4937	50.8	-39 7	7.9	8.0	Ko	4	..	13055b	58	3326	51.1	-51 19	7.8	8.1	B9	7	..	40275b
9	4717	50.8	-40 32	8.6	9.5	K2	1	..	19156b	59	1753	51.1	-52 32	9.1	9.1	B8	2	..	40275b
10	3934	50.8	-49 26	9.4	9.0	A2	3	..	40296b	60	1106	51.1	-62 4	9.9	10.0	A3	2	..	40096b
11	1967	50.8	-53 8	9.6	9.7	A5	1	..	40275b	61	1811	51.2	+32 50	6.86	7.00	A5	..	2,5	56,86
12	1907	50.8	-54 44	8.7	8.5	Ao	4	E	41151b	62	2244	51.2	+20 34	8.23	8.65	F5	4	3,3	37607i
13	1922	50.8	-56 9	7.9	7.9	A2	3	..	42241b	63	1944	51.2	+15 29	8.8	9.6	G5	4	..	5396m
14	1777	50.8	-57 23	9.1	9.1	A	1	..	41151b	64	2049	51.2	+ 7 2	8.4	8.4	Ao	5	..	37628i
15	963	50.8	-64 23	8.7	9.5	G5	6	..	21452b	65	2693	51.2	-10 30	8.5	9.7	K5	1	..	19016b
16	856	50.8	-68 40	8.3	8.3	Ao	2	..	24527b	66	2498	51.2	-11 30	9.2	9.8	Go	4	..	19016b
17	973	50.8	-69 11	9.3	10.3	Ko	2	..	21452b	67	2715	51.2	-13 15	9.2	9.8	Go	1	..	19016b
18	1161	50.9	+60 32	8.6	9.0	F5	3	..	37705i	68	6980	51.2	-30 39	7.89	9.1	K2	3	..	18994b
19	2667	50.9	- 5 32	10.0	10.0	Ao	2	..	19226b	69	4948	51.2	-39 25	7.5	8.6	K2	4	..	13055b
20	2636	50.9	-15 19	9.8	10.4	Go	2	..	19016b	70	4497	51.2	-47 14	10.2	9.8	A	1	..	40296b
21	2631	50.9	-16 41	8.7	8.7	Ao	3	..	41219b	71	3659	51.2	-50 26	9.6	9.4	Ao	2	..	40275b
22	2637	50.9	-21 22	8.4	9.8	Ko	2	..	13144b	72	1755	51.2	-53 1	9.1	9.7	G	1	..	40275b
23	5175	50.9	-35 40	7.5	8.1	Ko	7	2,1	40081b	73	836	51.2	-70 55	8.9	8.9	Ao	4	E	21452b
24	4735	50.9	-46 8	9.8	9.0	Ao	3	..	40296b	74	1461	51.3	+46 44	8.7	9.3	Go	2	..	38639i
25	4222	50.9	-48 45	9.0	8.5	Ao	5	..	40296b	75	2029	51.3	+22 15	7.01	7.79	G5	5	0,5	37607i
26	3937	50.9	-49 19	9.4	9.0	Ao	3	..	40296b	76	2000	51.3	+14 45	9.34	9.76	F5	4	..	5396m
27	758	50.9	-71 11	9.1	9.2	A3	3	E	21452b	77	2694	51.3	-10 46	8.1	8.1	B9	7	..	19016b
28	1351	51.0	+56 15	7.8	8.6	G5	4	..	37705i	78	2707	51.3	-15 4	6.68	7.68	Ko	9	..	19016b
29	1351	51.0	+52 42	8.9	9.9	K	1	..	38240i	79	2639	51.3	-21 12	8.6	9.8	G	1	..	13144b
30	2015	51.0	+25 23	9.2	9.8	Go	1	..	38630i	80	2640	51.3	-21 26	8.6	9.6	A5	2	..	13144b
31	2100	51.0	+ 2 4	8.6	8.6	A	4	R	37654i	81	2441	51.3	-23 0	8.6	9.2	Go	2	..	13144b
32	2714	51.0	-13 39	8.4	8.5	A2	7	..	19016b	82	6574	51.3	-26 56	9.6	10.4	A5	1	..	18994b
33	2706	51.0	-15 8	8.91	9.41	F8	3	..	19016b	83	6072	51.3	-27 18	4.87	4.93	A2	..	R	56,86
34	2566	51.0	-20 6	9.33	9.8	F8	2	..	41219b	84	5869	51.3	-33 1	7.02	7.1	Fo	8	..	40081b
35	6570	51.0	-26 19	9.0	10.1	K5	2	..	18994b	85	5186	51.3	-36 4	8.9	9.8	Ko	1	..	40081b
36	5859	51.0	-33 3	8.6	8.7	F2	4	..	40081b	86	5032	51.3	-39 3	8.6	8.9	F8	3	..	13055b
37	5565	51.0	-33 46	7.29	8.4	Ko	6	..	40081b	87	3943	51.3	-49 45	9.4	9.4	F5	1	..	40296b
38	5253	51.0	-38 1	7.9	9.5	K5	2	..	13055b	88	3660	51.3	-50 45	9.4	9.1	A2	3	..	40275b
39	4939	51.0	-45 5	8.09	7.9	B9	5	0,7	19156b	89	1758	51.3	-52 58	9.2	9.6	F5	2	..	40275b
40	3323	51.0	-51 12	8.6	9.0	G5	4	..	40275b	90	1975	51.3	-53 56	8.7	8.9	Ao	4	..	40275b
41	3325	51.0	-52 6	7.9	7.9	B8	8	..	40275b	91	966	51.3	-65 6	9.20	10.4	K2	3	..	21452b
42	1751	51.0	-52 15	8.1	8.4	B8	6	..	40275b	92	859	51.3	-68 22	8.2	9.4	K5	1	..	24527b
43	964	51.0	-65 1	10.06	11.0	K2	1	..	21452b	93	1981	51.4	+38 39	6.86	7.28	F5	5	..	37345i
44	1847	51.1	+29 36	9.1	9.4	Fo	2	..	38630i	94	2081	51.4	+ 4 37	6.36	7.14	G5	8	5,7	37654i
45	2087	51.1	+17 54	7.8	8.6	G5	4	0,3	37607i	95	2718	51.4	-20 29	9.2	9.2	F8	3	..	41219b
46	1942	51.1	+12 49	8.4	8.9	F8	3	..	37628i	96	7553	51.4	-25 2	9.25	8.9	Ao	4	..	18994b
47	2086	51.1	+ 5 20	9.1	9.1	Ao	2	..	37654i	97	6717	51.4	-25 38	9.3	10.1	Ao	1	..	18994b
48	2079	51.1	+ 3 58	8.3	8.6	Fo	3	..	37654i	98	6941	51.4	-29 35	8.4	9.1	F5	5	..	18994b
49	2101	51.1	+ 2 31	9.1	9.7	G	1	..	37654i	99	6987	51.4	-30 9	8.15	8.5	A2	8	..	18994b
50	2668	51.1	- 5 53	8.4	9.4	Ko	4	..	19226b	100	6988	51.4	-30 48	7.9	9.3	Ko	3	..	18994b

## THE HENRY DRAPER CATALOGUE.

76500

8<sup>h</sup> 51<sup>m</sup>.4

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	6986	m. 51.4	° 30 54	7.9	9.0	G5	4	..	18994b	51	6578	m. 51.7	° 26 16	8.0	8.7	Ko	5	..	18994b
2	6698	51.4	31 42	9.8	9.4	F5	3	..	40081b	52	6078	51.7	27 37	8.6	10.3	K5	2	..	18994b
3	5397	51.4	34 12	8.1	9.5	Ko	3	..	40081b	53	6707	51.7	31 46	10.5	9.6	Ao	3	..	40081b
4	541	51.4	75 17	8.0	8.1	A2	2	..	24452b	54	4736	51.7	40 42	7.8	8.5	B3	4	..	19156b
5	383	51.5	+74 38	8.8	9.3	F8	3	..	37714i	55	4636	51.7	41 54	9.3	9.5	F5	2	..	19156b
6	1352	51.5	+52 23	8.0	8.3	F2	3	..	38240i	56	4505	51.7	47 14	8.6	8.4	B3	4	R	40296b
7	1625	51.5	+47 8	7.9	8.9	Ko	3	..	38240i	57	935	51.7	66 57	9.8	11.0	K5	1	..	21452b
8	1979	51.5	+17 32	6.29	7.29	Ko	7	0,7	37607i	58	1009	51.7	67 30	9.8	9.9	A3	4	..	21452b
9	2665	51.5	7 34	8.8	9.1	Fo	4	..	19226b	59	294	51.8	+79 44	7.85	7.85	Ao	6	..	37714i
10	2718	51.5	13 31	8.2	8.0	Bo	7	..	19016b	60	2697	51.8	10 43	8.1	9.3	K5	3	..	19016b
11	2717	51.5	14 6	9.1	9.9	G5	2	..	19016b	61	2644	51.8	15 45	10.3	10.3	A	1	E	19016b
12	7902	51.5	23 27	6.47	6.8	A3	7	1,10	11015b	62	6580	51.8	26 39	9.4	10.3	A2	2	..	18994b
13	6576	51.5	26 43	9.8	10.6	Ko	1	..	18994b	63	6947	51.8	29 26	8.4	10.1	Ko	1	..	18994b
14	5260	51.5	37 57	7.37	9.2	K2	5	..	13055b	64	5577	51.8	33 54	7.4	8.1	B5	3	0,7	9427b
15	4732	51.5	40 53	10.3	9.7	F	1	..	19156b	65	4764	51.8	43 25	8.5	7.9	Ao	6	..	19156b
16	4762	51.5	43 27	8.3	8.1	Ao	7	..	19156b	66	4951	51.8	44 40	6.32	6.5	B3	4	..	4947b
17	4502	51.5	47 11	9.6	8.7	A2	4	..	40296b	67	4694	51.8	45 59	7.8	7.8	Ao	7	2,2	40296b
18	3947	51.5	49 30	9.0	9.0	A2	3	..	40296b	68	3671	51.8	50 29	9.4	9.6	B8	2	..	40275b
19	1760	51.5	52 37	9.6	9.7	A2	1	..	40275b	69	1983	51.8	53 24	8.5	10.0	K5	1	..	40275b
20	1979	51.5	53 57	9.8	9.8	Ao	1	..	40275b	70	302	51.8	80 45	8.7	9.9	K5	2	0,2	20869b
21	1162	51.6	+58 36	8.6	9.7	K2	1	..	37705i	71	1923	51.9	+34 18	8.1	9.1	Ko	2	E	37345i
22	1705	51.6	+48 26	8.0	9.0	Ko	1	..	38240i	72	1795	51.9	+30 38	6.20	6.62	F5	7	..	38173i
23	1945	51.6	+21 29	9.5	10.1	G	2	..	37607i	73	1863	51.9	+16 38	7.8	8.8	Ko	5	..	5396m
24	1943	51.6	+12 36	9.1	10.1	Ko	1	..	38198i	74	2002	51.9	+14 32	9.5	9.6	A2	3	..	5396m
25	2430	51.6	+0 46	8.19	9.26	K2	1	..	37606i	75	2500	51.9	4 55	9.4	9.7	Fo	2	..	19226b
26	2163	51.6	1 59	8.4	8.5	A2	4	..	22652b	76	2669	51.9	7 48	9.1	10.2	K2	3	..	19226b
27	2531	51.6	8 13	9.6	10.1	F8	1	..	19226b	77	2532	51.9	8 41	9.24	10.24	Ko	1	..	19226b
28	2500	51.6	11 23	9.4	9.8	F5	3	..	19016b	78	2720	51.9	13 20	9.2	9.8	Go	1	..	19016b
29	2641	51.6	15 23	9.2	10.0	G5	2	..	19016b	79	2639	51.9	16 19	6.15	7.15	Ko	7	0,10	46198b
30	6721	51.6	25 53	8.4	8.6	Fo	4	..	18994b	80	6727	51.9	28 13	9.6	9.6	Ao	3	..	18994b
31	6702	51.6	31 48	9.0	9.0	Ko	3	..	40081b	81	1264	52.0	+54 48	8.16	9.16	Ko	4	..	37705i
32	5400	51.6	34 28	9.5	10.0	Fo	1	..	40081b	82	1864	52.0	+15 58	5.64	5.78	A5	..	0,8	56,86
33	5178	51.6	36 26	7.9	9.5	Ko	2	..	40081b	83	2099	52.0	+2 54	6.84	7.18	F2	6	0,7	37606i
34	4780	51.6	43 6	7.9	7.5	B3	5	..	19156b	84	2695	52.0	9 57	8.6	9.6	Ko	2	..	19226b
35	4750	51.6	47 2	8.9	9.1	B2	4	..	40296b	85	2699	52.0	10 43	9.1	9.9	G5	2	..	19016b
36	4504	51.6	47 13	9.0	8.8	Oa	..	0,2	28,202	86	2570	52.0	19 15	9.8	10.1	Ao	2	..	41219b
37	3949	51.6	49 30	9.6	9.4	A2	1	..	40296b	87	5185	52.0	37 2	9.5	9.5	A2	3	..	40081b
38	1174	51.6	59 59	5.98	5.81	B3	..	..	28,202	88	4698	52.0	45 18	9.1	8.7	Ao	3	2,2	19156b
39	335	51.7	+76 48	7.84	8.40	Go	6	..	37714i	89	4758	52.0	46 31	8.2	8.7	B9	6	..	40296b
40	1814	51.7	+31 53	8.7	9.5	G5	1	..	38634i	90	3340	52.0	51 54	10.0	9.6	B9	2	..	40275b
41	1946	51.7	+21 44	8.7	9.7	K	1	..	37607i	91	1841	52.0	55 10	9.4	9.4	Ao	2	..	40275b
42	1862	51.7	+16 40	7.9	8.5	Go	6	5,3	5396m	92	1036	52.1	+62 20	7.8	8.8	Ko	4	5,4	37705i
43	1945	51.7	+15 43	5.16	5.24	A3	..	1,9R	56,86	93	1093	52.1	+61 29	8.6	8.6	Ao	4	..	37705i
44	1947	51.7	+11 9	8.4	8.8	F5	4	..	37628i	94	1265	52.1	+54 22	8.6	9.2	Go	2	..	37705i
45	2431	51.7	0 2	7.88	8.95	K2	3	..	37654i	95	1889	52.1	+36 12	6.46	6.46	Ao	8	..	37345i
46	2768	51.7	6 29	10.3	10.4	A3	1	..	19226b	96	2023	52.1	+23 21	8.5	9.9	Ma	..	..	M
47	2668	51.7	7 26	10.0	11.0	Ko	1	..	19226b	97	1948	52.1	+21 13	8.7	9.3	G	2	..	37607i
48	2694	51.7	9 33	9.0	9.8	G5	1	..	19226b	98	1980	52.1	+16 56	8.9	9.4	F8	5	..	5396m
49	2719	51.7	13 33	9.4	10.2	G5	2	..	19016b	99	2003	52.1	+14 36	9.5	10.1	Go	3	..	5396m
50	2642	51.7	15 46	8.6	9.7	K2	3	..	19016b	100	2210	52.1	+0 55	7.59	8.37	G5	5	0,3	37654i

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

76600

8<sup>h</sup> 52<sup>m</sup>.1

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	2094	52.1	— 0 58	8.4	9.2	G5	2	..	22652b	51	1991	52.4	— 53 36	8.9	9.7	G5	1	..	40275b
2	2503	52.1	— 12 2	9.1	9.1	Ao	4	..	19016b	52	1927	52.4	— 54 6	8.8	9.8	Ko	1	..	40275b
3	2721	52.1	— 13 18	9.2	10.3	K2	1	..	19016b	53	1925	52.4	— 54 35	5.72	6.6	F5	..	0,5-	56,126
4	2640	52.1	— 16 38	9.0	9.0	Ao	3	E	19016b	54	1181	52.4	— 59 10	8.6	9.1	A2	2	..	41151b
5	2447	52.1	— 23 6	9.4	10.1	Ao	2	..	13144b	55	146	52.4	— 86 28	9.5	10.7	K5	1	..	15145b
6	7564	52.1	— 25 5	9.05	8.4	Ao	5	..	18994b	56	1708	52.5	+ 48 40	7.9	8.3	F5	3	..	38240i
7	6731	52.1	— 29 4	8.0	9.5	Ko	3	..	18994b	57	1698	52.5	+ 26 52	8.3	9.1	G5	2	..	38173i
8	5272	52.1	— 37 58	10.3	10.1	A	1	..	39925b	58	1867	52.5	+ 16 30	9.1	10.1	Ko	2	..	5396m
9	5050	52.1	— 38 38	9.3	9.2	B9	3	..	13055b	59	1947	52.5	+ 15 28	10.1	11.2	K2	1	..	5396m
10	3955	52.1	— 49 56	9.6	9.3	A2	2	..	40296b	60	1950	52.5	+ 11 13	8.0	8.0	Ao	6	..	37628i
11	3676	52.1	— 50 12	9.2	9.0	B9	2	..	40296b	61	2146	52.5	+ 8 28	8.6	9.1	F8	1	..	38198i
12	1922	52.1	— 54 19	7.12	7.6	F8	6	0,5	40275b	62	2144	52.5	+ 8 21	9.1	9.7	Go	1	..	38198i
13	860	52.1	— 68 45	8.6	9.4	G5	3	..	21452b	63	2671	52.5	— 7 23	9.2	10.3	K2	1	..	19226b
14	976	52.1	— 69 27	7.2	7.2	Ao	8	..	24527b	64	2709	52.5	— 14 11	9.1	10.1	Ko	3	..	19016b
15	449	52.1	— 77 46	9.3	9.3	Ao	4	..	21453b	65	6594	52.5	— 26 38	9.0	9.5	A2	5	..	18994b
16	541	52.2	+ 70 11	9.0	9.1	A2	2	..	38602i	66	6740	52.5	— 28 49	9.1	9.0	B8	4	..	18994b
17	1809	52.2	+ 44 49	8.02	8.58	Go	4	..	38639i	67	7007	52.5	— 30 31	9.1	9.6	F5	2	E	40081b
18	1789	52.2	+ 33 35	8.3	9.7	Ma	1	E	37345i	68	5192	52.5	— 36 45	6.83	7.4	Go	4	0,8	42246b
19	1696	52.2	+ 26 56	9.2	9.2	Ao	1	..	38173i	69	5281	52.5	— 37 30	9.7	10.0	Ao	1	..	39925b
20	2696	52.2	— 9 14	8.6	9.7	K2	2	..	19226b	70	4978	52.5	— 39 22	9.3	8.9	F8	3	..	13055b
21	2738	52.2	— 12 26	8.6	9.7	K2	3	..	19016b	71	4773	52.5	— 43 18	9.8	9.4	F8	1	..	19156b
22	2527	52.2	— 19 5	8.2	10.4	K5	1	..	41219b	72	1993	52.5	— 53 32	9.1	10.0	K2	1	..	40275b
23	2571	52.2	— 19 46	8.6	9.5	F8	2	..	13144b	73	546	52.5	— 76 55	9.6	9.6	Ao	4	..	21453b
24	2572	52.2	— 20 0	9.4	10.1	Ao	1	..	13144b	74	357	52.6	+ 75 23	9.12	10.12	Ko	1	..	37714i
25	542	52.2	— 75 35	9.4	10.4	Ko	2	..	21453b	75	1267	52.6	+ 54 10	8.4	9.4	Ko	2	..	37705i
26	1465	52.3	+ 51 34	8.6	9.0	F5	2	..	38240i	76	1816	52.6	+ 32 45	7.8	9.0	K5	2	E	37345i
27	2131	52.3	+ 19 40	8.55	8.83	Fo	3	..	37607i	77	1868	52.6	+ 16 47	9.5	10.3	G5	4	..	5396m
28	2016	52.3	+ 13 48	10.1	11.1	Ko	1	..	5396m	78	1952	52.6	+ 11 26	9.1	9.9	G5	3	..	37628i
29	2093	52.3	+ 9 46	6.32	7.32	Ko	7	0,8	38198i	79	2670	52.6	— 5 18	9.25	10.25	Ko	1	..	19226b
30	2092	52.3	+ 9 40	8.32	9.67	Ma	1	..	38198i	80	2776	52.6	— 6 22	9.2	10.4	K5	1	..	19226b
31	2071	52.3	+ 6 17	8.4	9.5	K2	1	..	38198i	81	2774	52.6	— 7 1	8.0	8.0	Ao	8	..	19226b
32	2084	52.3	+ 4 50	8.56	9.56	Ko	3	..	37606i	82	2536	52.6	— 9 1	8.73	8.79	A2	5	..	19226b
33	2211	52.3	+ 1 47	8.4	8.4	Ao	4	..	37654i	83	2742	52.6	— 12 29	8.7	9.0	F2	4	..	19016b
34	2772	52.3	— 6 21	8.4	8.4	B8	7	..	19226b	84	6595	52.6	— 27 5	8.8	9.5	Ao	4	..	18994b
35	2644	52.3	— 17 3	6.62	6.96	F2	7	..	41219b	85	6741	52.6	— 28 42	9.1	9.8	A2	3	..	18994b
36	2696	52.3	— 17 38	8.5	9.5	Ko	3	..	41219b	86	7013	52.6	— 30 20	7.5	9.4	K2	3	..	40081b
37	6735	52.3	— 28 58	7.50	8.1	A2	8	..	18994b	87	6720	52.6	— 31 28	10.3	9.7	A2	1	..	40081b
38	5892	52.3	— 32 49	10.1	9.7	F2	2	..	40081b	88	6722	52.6	— 31 42	8.8	9.0	Fo	4	..	40081b
39	1787	52.3	— 57 23	8.6	9.1	A	1	..	41151b	89	5417	52.6	— 34 37	8.1	9.5	Ko	2	..	40081b
40	1790	52.3	— 57 52	6.32	7.0	B5	..	0,7-	56,126	90	5194	52.6	— 36 35	8.4	10.1	K5	1	..	40081b
41	936	52.3	— 66 14	9.6	10.4	G5	2	..	21452b	91	5057	52.6	— 38 42	8.3	8.2	A2	5	..	13055b
42	351	52.4	+ 76 51	8.81	8.87	A2	3	..	37714i	92	4652	52.6	— 41 46	8.9	9.2	Go	1	..	19156b
43	1209	52.4	+ 59 39	8.4	9.2	G5	2	..	37705i	93	4769	52.6	— 47 5	10.0	9.6	Ao	2	..	40296b
44	1707	52.4	+ 48 26	3.12	3.26	A5	..	R	5427c	94	4248	52.6	— 48 56	10.9	9.7	A2	2	..	38415b
45	1810	52.4	+ 44 42	8.87	9.37	F8	1	..	38639i	95	1994	52.6	— 53 26	9.8	9.8	A	1	..	40275b
46	2096	52.4	— 0 16	8.23	8.51	Fo	4	..	22652b	96	1240	52.6	— 60 25	8.9	9.2	Ao	2	..	41151b
47	2095	52.4	— 0 44	8.0	9.1	K2	3	..	22652b	97	1060	52.6	— 63 22	9.6	9.6	Ao	3	..	21452b
48	2648	52.4	— 22 8	8.1	9.3	F8	3	..	13144b	98	1047	52.6	— 65 27	10.1	10.9	G5	3	..	21452b
49	4707	52.4	— 45 58	8.0	8.4	B8	4	..	40296b	99	939	52.6	— 66 19	9.4	9.9	F8	3	..	21452b
50	4766	52.4	— 46 29	8.5	8.1	B9	5	..	40296b	100	938	52.6	— 66 26	8.5	9.3	G5	6	..	21452b

## THE HENRY DRAPER CATALOGUE.

76700

8<sup>h</sup> 52<sup>m</sup>.6

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	862	52.6	-68 10	8.4	8.8	F5	5	..	21452b	51	1912	53.0	+35 21	8.6	9.4	G5	2	E	37345i
2	278	52.7	+81 26	7.83	8.17	F2	5	..	37546i	52	2018	53.0	+25 48	7.23	8.01	G5	4	..	38173i
3	336	52.7	+76 5	8.27	8.41	A5	5	..	37714i	53	1870	53.0	+15 57	9.8	10.6	G5	2	..	5396m
4	1463	52.7	+46 9	6.61	6.61	A0	8	..	38240i	54	1949	53.0	+15 47	9.5	10.7	K5	1	..	5396m
5	1896	52.7	+41 19	8.5	9.1	Go	2	..	37390i	55	2005	53.0	+14 4	10.5	11.3	G5	1	..	5396m
6	2090	52.7	+18 42	6.56	6.56	A0	8	0.9	37617i	56	1948	53.0	+12 15	4.27	4.35	A3	..	0, R	56,86
7	2537	52.7	- 8 43	9.8	10.8	K0	1	..	19226b	57	2112	53.0	+ 1 55	6.50	6.50	A0	8	2.9	37606i
8	2701	52.7	- 9 42	7.86	8.86	K0	7	..	19226b	58	2703	53.0	-11 0	10.0	10.6	Go	1	..	19016b
9	6739	52.7	-25 11	9.50	9.5	A0	3	..	18994b	59	2749	53.0	-12 42	9.1	9.1	A0	4	..	19016b
10	6741	52.7	-25 20	9.3	10.3	A2	2	..	18994b	60	6746	53.0	-25 38	10.3	10.1	A0	2	..	18994b
11	5895	52.7	-32 12	10.6	9.9	A0	1	..	40081b	61	6103	53.0	-27 39	9.6	10.4	K0	1	..	18994b
12	5594	52.7	-33 25	10.8	9.9	A	1	..	40081b	62	5424	53.0	-34 31	9.9	9.6	F0	1	..	40081b
13	5211	52.7	-35 34	10.1	10.1	A0	1	..	40081b	63	4987	53.0	-39 16	8.4	9.7	K5	1	..	13055b
14	5196	52.7	-36 30	9.3	10.0	A2	2	..	40081b	64	4802	53.0	-42 49	9.6	9.1	B8	2	..	19156b
15	5058	52.7	-38 54	8.4	8.6	A0	4	0.3	13055b	65	1817	53.1	+32 19	8.3	9.1	G5	2	E	37345i
16	3685	52.7	-50 28	8.4	8.7	A0	6	..	40275b	66	1873	53.1	+26 19	7.8	8.4	Go	3	..	38173i
17	1929	52.7	-54 28	8.9	8.9	F0	2	..	40275b	67	2114	53.1	+ 2 28	8.4	9.4	K0	2	E	37654i
18	1285	52.7	-58 19	8.4	8.6	A0	3	..	41151b	68	2752	53.1	- 2 44	8.6	8.6	A0	7	..	19392b
19	1596	52.8	+50 8	8.8	9.1	F2	2	..	38240i	69	2520	53.1	- 3 11	8.2	9.3	K2	7	..	19392b
20	2017	52.8	+25 46	8.7	8.8	A5	2	..	38173i	70	2778	53.1	- 6 33	8.6	8.6	B9	7	..	19226b
21	2671	52.8	- 5 14	8.90	9.18	F0	4	..	19226b	71	2509	53.1	-11 59	9.2	10.2	K	1	..	19016b
22	2538	52.8	- 8 23	8.99	8.99	A0	4	..	19226b	72	2528	53.1	-18 45	8.4	9.2	G5	3	..	41219b
23	6725	52.8	-31 22	9.8	10.2	K0	1	..	40081b	73	5602	53.1	-33 10	9.2	9.9	K0	1	..	40081b
24	5901	52.8	-32 9	9.0	9.1	A0	4	..	40081b	74	5603	53.1	-33 48	9.2	9.0	A0	4	..	40081b
25	4903	52.8	-45 1	8.78	8.7	B9	4	..	19156b	75	4656	53.1	-41 53	9.0	8.6	A2	2	..	19156b
26	3354	52.8	-51 12	7.6	7.9	A2	8	..	40275b	76	4782	53.1	-43 33	9.2	8.8	A5	3	..	19156b
27	1778	52.8	-52 14	8.5	9.7	K5	1	..	40275b	77	4531	53.1	-47 33	9.1	9.0	A0	4	..	38415b
28	1243	52.8	-60 16	3.98	3.93	B8	..	R	28,203	78	1785	53.1	-52 46	9.6	9.9	F0	1	..	40275b
29	1114	52.8	-61 41	9.3	10.3	K0	2	..	40096b	79	451	53.1	-77 40	9.6	9.9	F0	3	..	21453b
30	1466	52.9	+51 33	9.2	9.5	F	1	..	38240i	80	1952	53.2	+21 33	7.54	8.32	G5	4	0.3	37607i
31	1927	52.9	+34 3	8.7	9.8	K2	2	..	38634i	81	1951	53.2	+15 26	9.5	10.1	G	3	..	5396m
32	1699	52.9	+27 38	9.5	9.9	F5	2	..	38630i	82	1911	53.2	+ 9 51	8.75	9.17	F5	2	..	38198i
33	2022	52.9	+24 22	7.56	7.62	A2	4	..	37607i	83	2724	53.2	-13 12	9.8	10.4	Go	1	..	19016b
34	1954	52.9	+11 13	var.	var.	Ma	3	R	37628i	84	2530	53.2	-18 30	7.11	7.11	A0	8	..	41219b
35	2503	52.9	- 4 29	6.57	6.91	F2	10	..	19226b	85	7027	53.2	-31 5	9.3	9.3	A0	2	..	40081b
36	2777	52.9	- 6 58	9.8	10.3	F8	1	..	19226b	86	5605	53.2	-33 15	8.6	10.2	K5	1	..	40081b
37	2649	52.9	-15 13	9.76	9.76	A0	2	..	19016b	87	5204	53.2	-36 9	10.1	10.1	A2	1	..	40081b
38	2700	52.9	-17 39	8.4	8.5	A2	4	..	41219b	88	4785	53.2	-43 17	7.9	8.2	K5	4	..	19156b
39	2576	52.9	-19 16	9.0	10.1	F5	2	..	41219b	89	1934	53.2	-54 47	9.6	9.7	A5	1	..	40275b
40	6965	52.9	-29 28	8.0	8.4	F5	7	..	18994b	90	1127	53.2	-62 31	9.1	9.1	A0	2	..	13026b
41	5598	52.9	-33 18	9.5	9.3	A0	3	..	40081b	91	863	53.2	-68 6	9.0	9.1	A5	4	..	21452b
42	5201	52.9	-36 10	9.3	9.5	F0	2	..	40081b	92	2027	53.3	+23 11	8.1	8.1	A0	4	..	37607i
43	5200	52.9	-36 36	8.4	9.2	K0	3	..	40081b	93	2007	53.3	+14 38	8.2	9.2	K0	7	0.3	5396m
44	4710	52.9	-45 57	8.5	8.7	A0	3	..	40296b	94	2018	53.3	+13 46	9.3	10.3	K0	2	..	5396m
45	4249	52.9	-48 45	9.1	8.4	A0	6	..	38415b	95	1913	53.3	+10 20	8.4	9.2	G5	1	..	38198i
46	3971	52.9	-49 16	9.8	9.4	A2	3	..	38415b	96	2707	53.3	-10 35	9.1	10.1	K0	1	..	19016b
47	1846	52.9	-55 57	8.3	9.8	K5	1	..	40275b	97	2712	53.3	-14 35	9.1	9.2	A3	3	..	19016b
48	1062	52.9	-63 19	9.6	10.4	G5	2	E	21452b	98	2648	53.3	-16 55	8.6	9.1	F8	2	..	41219b
49	1300	53.0	+53 43	7.9	8.3	F5	4	..	37705i	99	7584	53.3	-24 28	7.38	7.5	K0	7	..	13144b
50	1790	53.0	+49 5	9.0	9.4	F5	2	..	38240i	100	6105	53.3	-27 20	7.45	8.3	A2	8	..	18994b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

76800

8<sup>h</sup> 53<sup>m</sup>.3

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	5073	53.3	-39 1	9.9	9.5	A3	1	..	39925b	51	5225	53.6	-35 40	10.3	10.1	A	1	..	40081b
2	4657	53.3	-41 46	8.3	8.6	Fo	3	..	19156b	52	4265	53.6	-48 42	10.5	9.6	B	2	R	38415b
3	4532	53.3	-47 29	8.9	8.5	Ao	5	..	38415b	53	1794	53.6	-52 32	8.9	9.9	K5	1	..	40275b
4	3980	53.3	-49 29	9.2	9.6	F5	3	..	38415b	54	1355	53.7	+56 15	8.1	8.5	F5	4	..	37705i
5	1788	53.3	-52 21	4.77	4.65	B5	..	R	28,203	55	1869	53.7	+42 55	8.7	9.5	G5	1	..	38639i
6	1786	53.3	-52 29	9.9	9.9	A	1	..	40275b	56	6768	53.7	-28 20	8.8	9.2	Ao	5	..	18994b
7	1118	53.3	-61 19	10.1	10.2	A3	1	..	40096b	57	6744	53.7	-31 17	8.2	9.6	Ma	2	..	40081b
8	864	53.3	-68 10	8.9	9.5	G	2	..	21452b	58	5081	53.7	-39 6	9.9	9.7	A5	1	..	39925b
9	279	53.4	+81 29	8.5	9.0	F8	3	..	38331i	59	5000	53.7	-39 24	10.1	9.5	Go	1	..	39925b
10	337	53.4	+76 33	9.9	9.9	A	2	..	37714i	60	3994	53.7	-49 18	7.1	9.0	Ko	5	..	38415b
11	499	53.4	+69 16	8.4	9.2	G5	2	..	38602i	61	1013	53.7	-67 30	9.9	10.2	Fo	3	..	21452b
12	679	53.4	+64 51	8.80	9.80	Ko	2	..	38603i	62	764	53.7	-71 16	9.9	9.9	A	2	E	21452b
13	1821	53.4	+32 49	5.64	6.42	G5	..	5,8R	56,86	63	298	53.8	+77 56	9.2	9.2	A	2	..	37714i
14	2148	53.4	+ 8 38	8.2	8.2	B9	5	..	38198i	64	1849	53.8	+29 24	8.1	9.2	K2	3	..	38173i
15	2099	53.4	- 0 51	8.6	9.7	K2	1	..	22652b	65	1876	53.8	+26 4	9.5	9.6	A5	2	..	38630i
16	2675	53.4	- 5 25	8.6	8.6	Ao	5	..	19226b	66	2022	53.8	+25 0	9.5	10.5	Ko	1	..	38173i
17	2649	53.4	-16 26	8.8	10.2	Ma	1	..	41219b	67	1984	53.8	+17 3	9.1	10.1	Ko	4	..	5396m
18	5428	53.4	-34 16	9.9	9.5	Fo	1	..	40081b	68	2088	53.8	+ 4 3	7.8	7.7	B5	5	R	37654i
19	4761	53.4	-41 0	8.9	9.9	Ko	1	..	38418b	69	2676	53.8	- 5 38	9.1	9.9	G5	3	..	19226b
20	4787	53.4	-43 46	9.4	9.4	K2	1	..	19156b	70	6770	53.8	-28 29	8.1	8.1	Ao	7	..	18994b
21	3694	53.4	-50 9	9.28	9.3	F8	2	..	40296b	71	5434	53.8	-34 32	8.4	9.2	F5	2	..	40081b
22	1998	53.4	-53 25	8.1	8.5	Ao	5	R	40275b	72	4771	53.8	-40 58	7.9	8.0	Ao	6	..	19156b
23	1852	53.4	-55 8	8.51	9.1	Ko	6	..	40275b	73	4726	53.8	-45 11	9.49	9.0	A3	2	..	19156b
24	1853	53.4	-55 9	7.86	9.1	Ko	3	..	41151b	74	4267	53.8	-48 45	10.5	9.6	A5	2	..	38415b
25	1248	53.4	-60 50	7.9	8.0	Ao	2	..	42241b	75	3995	53.8	-49 59	8.12	8.8	K2	4	..	40296b
26	865	53.4	-68 58	9.4	9.4	Ao	3	..	21452b	76	3374	53.8	-51 42	9.6	9.9	Ko	1	..	40275b
27	551	53.5	+68 1	4.99	6.34	Ma	9	R	37517i	77	1800	53.8	-52 35	9.6	9.6	Ao	1	..	40275b
28	1954	53.5	+42 46	8.7	9.2	F8	1	..	38639i	78	2001	53.8	-53 26	9.0	9.5	F8	1	..	40275b
29	1913	53.5	+35 13	7.47	8.03	Go	4	5,4	38634i	79	942	53.8	-66 24	8.6	8.7	A3	8	..	21452b
30	2093	53.5	+18 32	6.57	7.92	Mb	5	0,5	37607i	80	1598	53.9	+50 16	8.9	9.2	F2	1	..	38240i
31	2019	53.5	+13 22	9.1	10.1	Ko	3	..	5396m	81	1871	53.9	+43 18	8.5	9.6	K2	3	..	38639i
32	2522	53.5	- 3 54	8.6	9.0	F5	2	..	19226b	82	1872	53.9	+15 59	9.8	10.4	Go	5	..	5396m
33	2677	53.5	- 8 9	9.2	10.2	Ko	1	..	19226b	83	2008	53.9	+14 22	10.5	11.0	F8	2	..	5396m
34	2714	53.5	-14 59	9.4	9.8	F5	2	..	19016b	84	2099	53.9	+ 9 22	7.52	7.50	B9	7	..	38198i
35	6740	53.5	-31 28	11.9	9.9	A2	1	R	40081b	85	2541	53.9	- 8 16	9.1	9.4	Fo	3	..	19226b
36	5305	53.5	-37 28	9.3	9.8	Go	1	..	39925b	86	2710	53.9	-10 44	9.8	9.9	A5	1	..	19016b
37	4998	53.5	-39 48	9.7	9.2	Ao	2	..	39925b	87	2709	53.9	-10 56	8.4	9.4	Ko	3	..	19016b
38	4808	53.5	-42 52	7.6	7.5	B3	2	..	4947b	88	2511	53.9	-11 18	10.4	11.4	K	1	..	19016b
39	4789	53.5	-43 15	10.2	9.3	A2	1	..	19156b	89	2510	53.9	-11 33	9.8	10.6	G5	1	..	19016b
40	2000	53.5	-53 56	9.1	9.4	F2	1	..	40275b	90	2751	53.9	-12 47	9.0	9.8	G5	1	..	19016b
41	1855	53.5	-55 34	8.8	8.8	B9	4	0,3	40275b	91	7946	53.9	-24 3	8.8	8.3	Ao	4	..	13144b
42	1292	53.5	-59 3	8.4	9.2	G5	1	..	41151b	92	6754	53.9	-25 58	7.8	8.9	Ao	7	..	18994b
43	763	53.5	-71 8	9.4	9.4	Ao	3	E	21452b	93	6612	53.9	-26 26	8.1	10.3	K5	1	..	18994b
44	1468	53.6	+51 19	8.6	9.4	G5	2	..	38240i	94	5437	53.9	-34 48	9.5	10.0	A2	1	..	40081b
45	1791	53.6	+48 56	9.0	10.0	Ko	1	..	38240i	95	5229	53.9	-35 32	9.9	9.5	Ao	2	..	40081b
46	1929	53.6	+34 9	9.2	..	Ro	..	..	M	96	5227	53.9	-35 37	7.9	9.2	A5	4	..	40081b
47	2020	53.6	+13 6	9.1	9.7	Go	3	..	5396m	97	5084	53.9	-38 22	7.8	7.3	B9	3	..	42246b
48	2708	53.6	-11 5	9.8	10.1	F	1	..	19016b	98	4794	53.9	-43 53	7.4	7.5	B3	3	..	4947b
49	2728	53.6	-13 58	9.2	10.0	G5	3	..	19016b	99	4269	53.9	-48 25	10.5	10.2	A3	1	..	38415b
50	2654	53.6	-16 7	9.0	9.1	A3	4	..	19016b	100	3376	53.9	-51 26	9.1	9.6	Fo	3	..	40275b

THE HENRY DRAPER CATALOGUE.

76900

8h 53m.9

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
		m.	° ' "									m.	° ' "						
1	2004	53.9	-53 50	9.0	9.1	Ao	4	..	40275b	51	5617	54.2	-33 24	8.3	9.6	K2	2	..	40081b
2	2003	53.9	-53 54	8.5	8.8	Ao	4	..	40275b	52	5618	54.2	-34 2	7.8	8.5	B9	5	..	40081b
3	548	53.9	-76 59	9.1	9.9	G5	4	..	21453b	53	5010	54.2	-39 53	9.5	9.7	Ko	1	..	39925b
4	238	54.0	+83 31	9.2	9.5	Fo	3	..	38331i	54	4822	54.2	-42 9	8.2	7.6	B9	6	..	19156b
5	486	54.0	+71 42	7.12	7.40	Fo	8	..	38602i	55	1806	54.2	-52 19	8.9	7.8	B5	5	..	40275b
6	1930	54.0	+34 19	9.5	10.1	Go	1	..	38634i	56	2007	54.2	-53 13	8.8	9.4	K2	1	..	40275b
7	1823	54.0	+31 52	8.2	8.3	A2	2	E	37345i	57	1125	54.2	-61 30	8.4	9.5	K2	1	0,2	13026b
8	2021	54.0	+13 29	6.76	7.83	K2	8	2,5	5396m	58	1875	54.3	+15 54	9.3	10.5	K5	2	..	5396m
9	2055	54.0	+7 49	8.3	9.1	G5	4	..	38198i	59	1953	54.3	+15 33	8.4	9.4	Ko	3	..	5396m
10	2103	54.0	-0 14	8.23	8.65	F5	4	..	22652b	60	2150	54.3	+8 49	9.1	9.5	F5	1	..	38198i
11	2652	54.0	-16 58	8.0	9.0	Ko	4	..	41219b	61	2079	54.3	+6 45	8.6	8.7	A2	2	..	37606i
12	7948	54.0	-23 49	9.1	9.2	Go	2	..	13144b	62	2658	54.3	-15 36	6.92	7.99	K2	8	..	19016b
13	7041	54.0	-30 35	7.9	8.7	F5	7	..	40081b	63	6617	54.3	-26 28	10.3	9.9	Ao	2	..	18994b
14	7039	54.0	-30 43	9.8	9.4	A2	3	..	40081b	64	6618	54.3	-26 37	9.4	10.3	Go	1	..	18994b
15	4543	54.0	-47 49	8.9	8.4	Ao	4	..	38415b	65	6778	54.3	-28 27	10.3	10.1	Ao	1	..	18994b
16	4542	54.0	-47 56	9.8	9.6	F	2	..	38415b	66	5928	54.3	-32 37	10.6	9.9	Ao	1	..	40081b
17	3704	54.0	-50 41	7.7	8.4	F5	6	..	40275b	67	4824	54.3	-42 46	9.6	8.9	B8	3	..	19156b
18	1180	54.0	-60 5	7.45	8.9	K5	2	..	41151b	68	3710	54.3	-50 22	7.38	7.9	Bo	6	..	40296b
19	1121	54.0	-61 50	9.0	10.2	Ko	2	..	40096b	69	3382	54.3	-51 18	9.4	9.9	Ko	1	..	40275b
20	943	54.0	-66 53	8.6	9.6	Ko	7	..	21452b	70	1807	54.3	-52 22	8.6	8.5	B9	3	..	40275b
21	1212	54.1	+59 48	7.81	8.81	Ko	4	..	37705i	71	1192	54.3	-59 56	8.66	9.5	K2	1	..	41151b
22	1270	54.1	+53 56	8.4	9.2	G5	2	..	37705i	72	1126	54.3	-61 16	8.9	9.5	F5	2	E	38748b
23	1915	54.1	+35 15	8.3	9.1	G5	2	E	37345i	73	296	54.4	+79 17	8.6	9.6	Ko	1	..	37493i
24	1877	54.1	+26 50	6.63	6.69	A2	7	..	38173i	74	359	54.4	+75 7	8.32	8.88	Go	4	..	37714i
25	1952	54.1	+15 31	9.5	10.1	G	2	..	5396m	75	1826	54.4	+32 48	8.7	9.5	G5	1	..	38634i
26	2078	54.1	+6 8	8.9	9.3	F5	1	..	37606i	76	1851	54.4	+29 3	8.1	9.3	K5	2	..	38173i
27	2680	54.1	-5 28	8.6	9.1	F8	5	..	19226b	77	2216	54.4	+1 48	7.7	8.5	G5	3	..	37606i
28	2679	54.1	-5 38	8.8	8.9	A5	6	..	19226b	78	2758	54.4	-2 36	9.0	10.1	K2	2	..	19392b
29	2707	54.1	-9 59	8.7	9.9	K5	1	..	19016b	79	2513	54.4	-11 20	10.0	10.1	A2	2	..	19016b
30	2730	54.1	-13 44	9.4	10.5	K2	2	..	19016b	80	2655	54.4	-16 59	9.6	10.2	Go	2	..	46198b
31	2715	54.1	-14 36	9.2	9.6	F5	3	..	19016b	81	2587	54.4	-20 4	8.48	10.2	K5	1	..	13144b
32	2656	54.1	-15 45	5.92	6.48	Go	8	0,10	41219b	82	5444	54.4	-35 3	9.15	10.1	K5	1	..	40081b
33	2457	54.1	-22 27	8.7	9.8	K2	1	..	13144b	83	4277	54.4	-48 56	10.9	9.7	B9	2	..	38415b
34	2458	54.1	-22 33	8.6	9.2	Ko	2	..	13144b	84	3383	54.4	-51 42	10.0	9.9	F5	1	..	40275b
35	6774	54.1	-29 1	8.4	10.1	Ko	2	..	18994b	85	1194	54.4	-59 8	8.8	8.6	Ao	2	..	41151b
36	6752	54.1	-31 54	8.4	8.4	A2	5	..	40081b	86	1257	54.4	-60 28	8.5	8.8	Ao	2	..	41151b
37	5320	54.1	-37 20	8.1	10.0	Ko	1	..	39925b	87	1135	54.4	-62 50	9.2	10.6	Ma	2	..	40096b
38	5007	54.1	-39 42	8.6	9.1	Fo	4	0,4	13055b	88	1136	54.4	-63 5	8.7	9.0	Fo	6	0,3	21452b
39	4776	54.1	-40 22	10.1	9.7	Ao	1	..	39925b	89	971	54.4	-64 17	9.2	9.8	Go	3	..	21452b
40	4797	54.1	-43 10	9.1	8.4	Ao	3	..	19156b	90	196	54.5	+84 35	6.26	6.54	Fo	10	..	37546i
41	1067	54.1	-63 23	9.1	9.2	A2	5	2,2	21452b	91	2024	54.5	+24 53	8.51	9.86	Ma	1	..	38173i
42	1213	54.2	+58 55	8.8	9.1	F2	3	..	37705i	92	1919	54.5	+10 40	9.5	9.6	A2	2	..	38198i
43	1956	54.2	+42 11	4.09	4.51	F5	..	0,10	1861c	93	2543	54.5	-8 36	7.8	8.8	Ko	7	..	19226b
44	1986	54.2	+38 0	6.54	7.72	K5	5	..	37345i	94	2706	54.5	-17 22	8.8	10.0	K5	1	..	46198b
45	1825	54.2	+32 29	8.1	8.4	F2	3	E	37345i	95	6621	54.5	-27 2	8.2	10.1	K5	1	..	18994b
46	1951	54.2	+12 20	8.4	8.7	F2	3	..	38198i	96	6784	54.5	-28 26	9.4	10.1	A2	2	..	18994b
47	2653	54.2	-16 22	7.17	8.17	Ko	7	..	19016b	97	6785	54.5	-28 42	9.1	10.6	K	1	..	18994b
48	7951	54.2	-23 25	8.0	8.3	Fo	4	..	13144b	98	4991	54.5	-44 29	9.8	9.0	Ao	3	..	19156b
49	6777	54.2	-28 17	9.6	10.4	Ko	1	..	18994b	99	4279	54.5	-48 37	10.5	9.7	Ao	2	..	38415b
50	6753	54.2	-31 45	7.9	8.1	F5	7	..	40081b	100	3713	54.5	-50 45	8.8	9.1	F8	4	..	40275b

JOHN G. L. ...  
HARVARD ...  
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## ANNALS OF HARVARD COLLEGE OBSERVATORY.

77000

8<sup>h</sup> 54<sup>m</sup>.5

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1858	54.5	-55 54	9.4	9.4	Ao	2	..	40275b	51	1813	54.9	+44 5	8.6	9.1	F8	3	..	38639i
2	1301	54.5	-58 51	5.08	4.91	B3	..	R	28,203	52	2026	54.9	+24 12	8.8	9.8	Ko	1	..	38173i
3	972	54.5	-64 11	9.2	9.5	Fo	3	..	21452b	53	1878	54.9	+16 10	10.1	10.9	G5	2	..	5396m
4	868	54.5	-68 46	8.9	10.0	K2	3	..	21452b	54	2024	54.9	+13 23	10.5	11.3	G5	2	..	5396m
5	439	54.6	+72 7	7.8	7.8	B9	3	..	37714i	55	2513	54.9	-4 24	8.6	9.6	Ko	2	..	19226b
6	1599	54.6	+50 7	8.2	9.0	G5	4	..	38240i	56	7608	54.9	-24 20	8.28	8.3	G5	4	..	13144b
7	1827	54.6	+32 32	8.8	9.8	Ko	1	..	38634i	57	6791	54.9	-28 54	8.2	9.8	Ma	2	..	18994b
8	2011	54.6	+14 20	10.1	10.7	Go	2	..	5396m	58	5628	54.9	-33 37	9.2	9.6	K2	1	..	40081b
9	1956	54.6	+11 2	9.1	10.1	Ko	1	..	38198i	59	5251	54.9	-35 14	8.40	8.7	A5	4	..	40081b
10	2152	54.6	+8 2	9.1	10.1	Ko	1	..	38198i	60	5101	54.9	-38 46	8.9	11.3	Ko	1	..	39925b
11	2058	54.6	+7 32	9.1	9.9	G5	1	..	38198i	61	1127	54.9	-61 31	10.2	10.6	F5	1	..	40096b
12	2508	54.6	-4 10	8.4	9.4	Ko	3	..	19226b	62	869	54.9	-68 37	8.5	8.5	Ao	3	..	24527b
13	2683	54.6	-5 29	9.2	9.3	A3	3	..	19226b	63	767	54.9	-71 54	8.3	8.6	Fo	5	E	21452b
14	2545	54.6	-8 12	8.7	9.9	K5	2	..	19226b	64	1853	55.0	+29 38	9.5	9.6	A5	1	..	38630i
15	2659	54.6	-16 6	7.6	8.6	Ko	8	..	19016b	65	2037	55.0	+21 52	8.7	9.5	G5	2	..	37607i
16	6125	54.6	-27 55	8.0	9.3	Ao	3	..	18994b	66	1986	55.0	+16 58	9.5	10.3	G5	3	..	5396m
17	7044	54.6	-30 52	7.5	7.9	Ao	8	..	40081b	67	1954	55.0	+15 15	9.8	10.3	F8	2	..	5396m
18	6760	54.6	-31 35	7.65	8.1	Ao	8	..	40081b	68	2013	55.0	+14 35	9.5	10.1	Go	2	..	5396m
19	5625	54.6	-33 26	9.3	9.6	A3	2	..	40081b	69	2174	55.0	-2 9	7.92	8.99	K2	5	..	19392b
20	4282	54.6	-48 11	5.86	7.3	Ko	2	0.10	4947b	70	2757	55.0	-12 50	9.4	10.2	G5	2	..	19016b
21	2008	54.6	-53 29	8.9	9.4	F2	2	..	40275b	71	2720	55.0	-14 37	8.0	9.2	K5	3	..	19016b
22	1942	54.6	-56 22	8.3	8.8	B9	2	..	41151b	72	2658	55.0	-16 48	8.2	8.2	Ao	6	..	41219b
23	1015	54.6	-67 20	9.9	10.2	F2	3	..	21452b	73	7962	55.0	-23 49	9.3	9.0	Ao	3	..	13144b
24	2029	54.7	+22 52	8.1	8.6	F8	3	..	37607i	74	7964	55.0	-23 49	9.3	9.0	G5	2	..	13144b
25	2012	54.7	+14 14	9.3	10.1	G5	4	..	5396m	75	1944	55.0	-54 8	8.9	9.8	K5	1	..	40275b
26	6994	54.7	-29 15	8.0	8.7	F5	5	..	18994b	76	1128	55.0	-61 11	7.9	8.2	Ao	4	..	41151b
27	5229	54.7	-36 16	9.2	9.2	Fo	3	..	40081b	77	974	55.0	-64 38	8.9	8.9	B9	6	..	21452b
28	5094	54.7	-38 20	9.5	10.3	Ko	1	..	39925b	78	1630	55.1	+47 46	8.9	9.0	A2	2	..	38240i
29	4285	54.7	-48 25	11.5	9.9	A2	1	..	38415b	79	1938	55.1	+37 18	8.5	9.3	G5	1	..	37345i
30	1942	54.7	-54 44	8.9	9.8	K5	1	..	40275b	80	1703	55.1	+27 44	8.8	8.8	Ao	2	..	38173i
31	1943	54.7	-56 27	8.5	9.1	A5	3	..	40275b	81	2098	55.1	+3 56	8.5	8.6	A3	3	..	37606i
32	1306	54.7	-58 12	8.0	8.2	B5	2	..	41151b	82	2781	55.1	-6 41	8.4	8.8	F5	6	..	19226b
33	1138	54.7	-62 40	7.6	7.6	B9	8	..	13026b	83	2659	55.1	-16 20	9.0	10.1	K2	1	..	41219b
34	1069	54.7	-63 10	7.7	8.0	Fo	8	..	21452b	84	2536	55.1	-18 49	6.26	6.76	F8	10	..	41219b
35	338	54.8	+76 44	9.2	9.6	F5	2	..	37463i	85	2464	55.1	-22 47	8.02	8.9	K2	3	..	13144b
36	443	54.8	+72 59	8.8	8.9	A3	3	..	37714i	86	6631	55.1	-26 19	10.1	10.3	F5	1	..	18994b
37	1956	54.8	+21 8	8.8	9.9	K2	1	..	37607i	87	6793	55.1	-28 25	6.40	7.6	G5	9	..	18994b
38	2023	54.8	+13 36	9.1	10.1	Ko	3	..	5396m	88	5940	55.1	-32 43	9.2	9.0	Fo	3	..	40081b
39	2218	54.8	+1 0	8.74	9.30	Go	2	..	37606i	89	945	55.1	-66 27	9.8	10.4	G	1	..	21452b
40	2173	54.8	-1 11	8.8	9.6	G5	4	..	19392b	90	547	55.1	-73 40	8.0	8.1	A2	3	..	24452b
41	2684	54.8	-5 43	8.6	8.9	F2	4	..	19226b	91	1308	55.2	+54 55	8.16	8.66	F8	4	..	37705i
42	2546	54.8	-8 50	8.8	9.9	K2	2	..	19226b	92	1901	55.2	+41 21	7.7	8.1	F5	4	E	37390i
43	2733	54.8	-13 24	9.1	10.1	Ko	2	..	19016b	93	2138	55.2	+40 6	6.21	6.49	Fo	7	..	37345i
44	6997	54.8	-29 7	9.1	9.0	B9	3	..	18994b	94	1882	55.2	+26 17	8.9	9.9	Ko	2	..	38630i
45	6763	54.8	-32 4	9.4	9.9	A3	2	..	40081b	95	1879	55.2	+16 32	9.8	10.4	Go	4	..	5396m
46	4742	54.8	-45 49	8.6	9.0	G5	2	..	19156b	96	2027	55.2	+13 20	9.3	10.5	K5	2	..	5396m
47	1943	54.8	-54 32	8.5	8.9	Fo	4	0.3	40275b	97	2514	55.2	-4 33	8.8	9.8	Ko	2	..	19226b
48	982	54.8	-69 43	8.2	9.2	Ko	4	..	21452b	98	2743	55.2	-20 25	8.4	8.6	F8	4	..	13144b
49	550	54.8	-74 30	7.8	8.9	K2	2	..	24452b	99	2661	55.2	-21 44	8.5	8.9	Ao	3	..	13144b
50	1629	54.9	+47 43	8.9	9.4	F8	1	..	38240i	100	5943	55.2	-32 45	9.0	9.3	K2	2	..	40081b

## THE HENRY DRAPER CATALOGUE.

77100

8<sup>h</sup> 55<sup>m</sup>.2

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	947	55.2	-66 39	9.5	9.8	Fo	6	..	21452b	51	2521	55.6	-11 51	7.8	9.0	K5	3	..	19016b
2	503	55.3	+69 26	8.7	8.7	Ao	3	..	38602i	52	2722	55.6	-14 25	8.4	8.5	A5	7	..	19016b
3	1666	55.3	+45 33	8.9	9.0	A3	2	..	38639i	53	5257	55.6	-36 0	8.4	8.7	A2	4	..	40081b
4	1829	55.3	+32 39	5.83	5.89	A2	6	0.9	38630i	54	5239	55.6	-36 39	8.3	9.8	K5	1	..	13055b
5	2737	55.3	-13 54	8.8	8.9	A3	5	R	19016b	55	5342	55.6	-37 42	8.9	9.6	Ko	2	..	13055b
6	2735	55.3	-14 8	8.6	8.9	Fo	6	..	19016b	56	2020	55.6	-53 56	9.8	9.8	A	1	..	40275b
7	2708	55.3	-18 0	9.8	9.9	A2	2	..	46198b	57	1266	55.6	-60 53	8.6	9.1	Go	3	..	40096b
8	7967	55.3	-23 51	8.6	8.3	F2	7	..	13144b	58	1357	55.7	+52 36	8.6	9.1	F8	2	..	38240i
9	7010	55.3	-29 10	9.8	9.6	Ao	3	..	18994b	59	2084	55.7	+6 25	8.8	10.0	K5	1	..	38198i
10	5459	55.3	-34 55	8.0	9.2	G5	2	..	40081b	60	2693	55.7	-7 28	9.4	10.2	G5	1	..	19226b
11	5334	55.3	-37 51	8.9	8.7	A5	4	..	13055b	61	2664	55.7	-15 23	8.7	10.1	Ma	1	..	19016b
12	4846	55.3	-43 2	9.2	9.1	Ao	3	..	38418b	62	2748	55.7	-20 20	9.0	9.2	Ao	2	..	13144b
13	4844	55.3	-43 4	8.0	8.6	Fo	6	..	38418b	63	5949	55.7	-32 56	8.4	9.0	Ko	3	..	40081b
14	4819	55.3	-43 14	9.2	8.7	Ao	4	..	38418b	64	5637	55.7	-33 42	9.0	8.8	Ao	4	..	40081b
15	4808	55.3	-46 22	9.6	9.0	Ao	2	..	40296b	65	4803	55.7	-40 43	8.0	8.5	F5	4	..	19156b
16	4806	55.3	-46 41	9.8	9.8	Ko	1	R	40296b	66	4853	55.7	-42 13	9.8	8.9	B9	2	..	19156b
17	4807	55.3	-46 41	9.6	9.6	Ko	1	R	40296b	67	4855	55.7	-42 58	10.0	9.4	B9	4	..	38418b
18	4016	55.3	-49 10	9.8	9.3	Ao	3	..	38415b	68	2022	55.7	-53 25	10.0	10.0	A	1	..	40275b
19	4017	55.3	-49 52	7.58	8.7	Ko	7	..	38415b	69	1869	55.7	-55 16	9.4	9.5	A3	2	..	40275b
20	3727	55.3	-50 25	7.98	9.0	K5	4	..	40296b	70	1074	55.7	-63 32	8.9	9.2	Fo	4	..	21452b
21	1819	55.3	-52 50	9.0	9.0	Ao	3	..	40275b	71	1073	55.7	-63 58	9.7	10.9	K5	2	..	21452b
22	1897	55.4	+36 15	7.9	8.3	F5	4	..	37345i	72	1358	55.8	+52 40	8.2	9.2	Ko	2	..	38240i
23	2028	55.4	+12 58	7.9	7.9	Ao	5	0.8	38198i	73	1884	55.8	+26 47	8.3	8.6	Fo	3	..	38173i
24	2105	55.4	+8 56	8.9	10.0	K2	1	..	38198i	74	2139	55.8	+19 26	8.4	9.5	K2	1	..	37607i
25	2442	55.4	+0 33	8.0	8.0	Ao	4	..	37606i	75	1957	55.8	+15 41	8.6	9.8	K5	3	..	5396m
26	2520	55.4	-12 4	8.0	8.4	F5	6	..	19016b	76	2108	55.8	+9 14	10.1	10.5	F5	1	..	38198i
27	2467	55.4	-22 18	7.18	7.1	Fo	4	2.8	11015b	77	2523	55.8	-11 44	7.38	7.66	Fo	8	..	19016b
28	6798	55.4	-28 8	9.6	10.4	K5	1	..	18994b	78	6773	55.8	-31 42	9.8	9.6	A2	2	..	40081b
29	4567	55.4	-47 56	10.5	9.9	Ao	2	..	38415b	79	5261	55.8	-36 1	9.5	10.0	A2	2	..	40081b
30	4289	55.4	-48 24	10.2	10.2	Ko	1	..	38415b	80	5113	55.8	-38 50	8.6	8.8	A3	4	..	13055b
31	4018	55.4	-49 41	9.6	10.4	Ko	1	..	38415b	81	4295	55.8	-48 28	10.5	9.9	F8	1	..	38415b
32	2029	55.5	+13 33	10.1	10.7	G	2	..	5396m	82	4027	55.8	-49 12	10.5	9.7	B9	3	..	38415b
33	2107	55.5	+9 26	8.8	9.4	Go	2	..	38198i	83	4026	55.8	-49 19	10.5	9.7	Fo	2	..	38415b
34	2549	55.5	-8 43	7.74	8.16	F5	8	..	19226b	84	4028	55.8	-49 42	9.4	9.4	Ao	3	..	38415b
35	2759	55.5	-13 1	9.0	9.8	G5	2	..	19016b	85	1319	55.8	-58 48	7.7	8.0	B9	3	1.4	42241b
36	6779	55.5	-25 28	8.8	10.1	Ko	1	..	24494b	86	1075	55.8	-63 19	8.9	9.2	Fo	5	..	21452b
37	6141	55.5	-27 26	6.84	7.7	Go	8	..	18994b	87	1056	55.8	-65 49	7.6	8.6	Ko	9	..	21452b
38	7063	55.5	-30 59	8.2	10.1	K5	1	..	40081b	88	949	55.8	-66 54	9.3	10.1	G5	3	..	21452b
39	4849	55.5	-42 44	9.0	8.9	Fo	5	..	38418b	89	2187	55.9	+39 3	7.34	8.52	K5	2	..	37345i
40	4810	55.5	-46 51	5.22	5.4	Fo	..	0.8	28,203	90	1674	55.9	+28 18	5.95	6.09	A5	8	..	38173i
41	4290	55.5	-48 16	10.2	9.6	Ao	3	..	38415b	91	1961	55.9	+11 8	8.6	9.2	Go	2	..	38198i
42	4020	55.5	-49 37	9.1	9.6	Ko	3	..	38415b	92	1923	55.9	+10 23	8.8	9.6	G5	1	..	38198i
43	4019	55.5	-49 58	10.0	9.6	A2	2	..	38415b	93	2220	55.9	+1 41	7.5	7.5	Ao	7	..	37606i
44	2019	55.5	-53 18	9.0	10.0	Ko	1	..	40275b	94	2689	55.9	-5 52	8.4	8.5	A2	7	..	19226b
45	1948	55.5	-56 57	8.4	8.5	B9	3	R	41151b	95	2784	55.9	-7 1	8.6	10.0	Ma	2	..	19226b
46	1141	55.5	-62 31	9.0	9.1	A3	5	..	40096b	96	2551	55.9	-8 48	7.20	7.20	Ao	10	..	19226b
47	1072	55.5	-63 7	8.7	8.7	B8	6	2.3	21452b	97	2716	55.9	-10 44	9.1	10.1	Ko	1	..	19016b
48	871	55.5	-68 9	9.7	10.0	F	2	..	21452b	98	2524	55.9	-11 55	9.6	10.1	F8	1	..	19016b
49	138	55.5	-87 23	6.8	7.2	F5	3	3.8	11010b	99	2760	55.9	-12 46	8.2	8.3	A2	7	..	19016b
50	2030	55.6	+12 56	9.3	9.9	Go	3	0.2	5396m	100	2665	55.9	-15 46	7.9	8.0	A5	8	..	19016b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

77200

8<sup>h</sup> 55<sup>m</sup>.9

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	2711	55.9	-17 50	9.1	10.2	K2	1	..	46198b	51	2119	56.3	+ 3 12	9.1	9.1	A	2	..	37606i
2	2664	55.9	-22 5	8.2	9.0	Ko	3	..	13144b	52	2765	56.3	- 2 25	9.2	9.7	F8	3	..	19392b
3	7622	55.9	-24 47	8.0	8.3	A2	6	..	13144b	53	2526	56.3	-12 5	9.2	10.0	G5	1	..	19016b
4	6809	55.9	-28 34	8.4	9.9	Ko	2	..	18994b	54	2667	56.3	-15 57	9.0	10.0	Ko	1	..	41219b
5	5954	55.9	-32 57	8.4	9.0	K2	3	..	40081b	55	2663	56.3	-16 41	8.7	9.7	Ko	3	..	41219b
6	4692	55.9	-41 51	8.9	9.7	Ko	2	..	38418b	56	6785	56.3	-31 17	9.3	9.4	A5	1	..	40081b
7	4300	55.9	-48 27	9.6	9.4	B	2	R	38415b	57	6786	56.3	-32 1	9.1	9.4	F2	2	..	40081b
8	1270	55.9	-60 56	8.8	9.7	F5	4	..	40096b	58	4810	56.3	-40 52	4.42	4.92	F8	..	R	28,203
9	976	55.9	-64 54	9.6	9.9	Fo	4	..	21452b	59	4698	56.3	-42 0	9.2	9.2	A3	2	..	38418b
10	1814	56.0	+43 53	9.5	9.9	F5	1	..	38639i	60	5015	56.3	-44 15	9.6	8.7	B9	3	..	19156b
11	1960	56.0	+15 36	7.9	8.3	F5	8	3,3	5396m	61	1878	56.3	-55 14	9.22	9.7	K2	1	..	40275b
12	2102	56.0	+ 4 19	9.1	9.1	A	1	..	37606i	62	1139	56.3	-61 52	9.1	9.5	A3	2	..	40096b
13	2117	56.0	+ 3 9	9.1	9.6	F8	2	..	37606i	63	1716	56.4	+48 4	8.0	8.4	F5	4	..	38240i
14	2532	56.0	- 4 7	8.0	8.3	Fo	7	..	19226b	64	1857	56.4	+29 30	9.1	10.2	K2	1	..	38630i
15	2694	56.0	- 7 17	9.8	10.3	F8	1	..	19226b	65	2100	56.4	+ 5 23	8.2	8.5	Fo	4	..	37606i
16	2762	56.0	-12 25	8.6	9.0	F5	5	..	19016b	66	2766	56.4	- 2 58	7.6	7.7	A5	8	0,7	19392b
17	2591	56.0	-19 49	9.0	9.6	F8	2	..	13144b	67	2787	56.4	- 6 26	8.8	8.9	A2	5	..	19226b
18	6813	56.0	-28 43	8.8	8.9	Ao	5	..	18994b	68	2726	56.4	-15 0	8.5	9.5	Ko	4	..	19016b
19	5642	56.0	-33 53	8.9	9.1	A2	3	..	40081b	69	2668	56.4	-15 45	9.1	9.4	Fo	2	..	19016b
20	5248	56.0	-36 13	9.2	10.1	K5	1	..	39925b	70	5051	56.4	-39 16	9.3	9.9	Ko	1	..	39925b
21	5247	56.0	-36 54	8.7	8.9	Ao	4	..	13055b	71	4818	56.4	-46 55	9.2	9.4	Ko	4	..	38415b
22	5119	56.0	-38 11	10.3	9.5	A3	2	..	39925b	72	4038	56.4	-49 52	9.6	9.6	Fo	3	..	38415b
23	4806	56.0	-40 17	9.9	9.7	B9	1	..	39925b	73	3744	56.4	-50 29	8.6	8.4	Ao	4	..	40296b
24	4571	56.0	-47 54	7.5	7.8	Ko	7	..	38415b	74	3405	56.4	-51 55	10.0	9.7	G	1	..	40275b
25	4302	56.0	-49 3	10.9	9.7	A2	2	..	38415b	75	872	56.4	-68 38	8.6	9.1	F8	4	..	21452b
26	1952	56.0	-54 15	8.0	8.0	B9	7	1,6	40275b	76	1797	56.5	+49 27	8.5	9.7	K5	2	..	38240i
27	1601	56.1	+50 22	6.81	6.87	A2	7	..	38240i	77	1962	56.5	+15 0	8.54	8.96	F5	6	0,2	5396m
28	1712	56.1	+48 34	9.2	9.7	F8	1	..	38240i	78	2062	56.5	+ 6 54	8.2	9.0	G5	2	..	37606i
29	1885	56.1	+26 36	8.9	9.4	F8	1	..	38630i	79	2447	56.5	+ 0 25	8.0	8.4	F5	5	..	37606i
30	1990	56.1	+17 30	7.11	7.09	B9	5	..	37607i	80	2110	56.5	- 0 11	7.48	7.54	A2	4	..	37606i
31	2554	56.1	- 8 50	7.25	7.25	Ao	10	..	19226b	81	2111	56.5	- 1 4	7.5	7.6	A2	4	..	37606i
32	2751	56.1	-20 50	7.36	7.6	Fo	8	..	13144b	82	2696	56.5	- 7 31	7.9	8.9	Ko	6	..	19226b
33	1829	56.1	-52 58	7.4	9.0	K2	3	..	40275b	83	2546	56.5	-18 57	7.46	7.52	A2	7	..	41219b
34	1603	56.2	+50 29	9.5	..	R5	1	..	38240i	84	2668	56.5	-21 36	8.4	9.3	F2	2	..	13144b
35	1713	56.2	+47 59	8.9	9.4	F8	2	..	38240i	85	7983	56.5	-23 46	7.04	7.4	Ao	5	0,7	11015b
36	2181	56.2	- 2 10	7.87	8.87	Ko	7	..	19392b	86	4870	56.5	-42 32	9.8	8.6	Ao	4	..	38418b
37	2712	56.2	-17 57	8.6	8.6	Ao	4	..	41219b	87	4835	56.5	-44 2	7.9	8.7	K5	2	..	19156b
38	5644	56.2	-33 9	10.1	9.6	F8	2	..	40081b	88	1835	56.5	-52 25	8.6	9.7	K2	1	..	40275b
39	5351	56.2	-37 49	10.8	10.4	Ao	1	..	39925b	89	990	56.5	-69 16	7.5	7.6	A2	7	..	24527b
40	4831	56.2	-43 9	8.6	9.1	Ao	4	..	38418b	90	772	56.5	-71 52	8.6	8.6	A	3	E	21452b
41	4304	56.2	-48 26	11.5	10.5	K2	1	..	38415b	91	199	56.6	+84 2	8.7	8.7	B9	5	..	37546i
42	4303	56.2	-49 3	9.1	9.6	G5	4	..	38415b	92	1098	56.6	+61 23	7.72	8.50	G5	5	..	37705i
43	1949	56.2	-57 5	7.9	9.1	K2	2	..	41151b	93	2089	56.6	+ 6 4	7.8	8.1	Fo	5	..	37606i
44	1207	56.2	-59 21	6.9	7.6	B8	5	0,3	41151b	94	2123	56.6	+ 3 45	8.4	9.0	G	2	..	37606i
45	365	56.2	-79 49	9.6	9.6	Ao	3	..	20869b	95	2126	56.6	+ 2 36	8.8	8.8	Ao	3	..	37606i
46	282	56.3	+81 14	6.53	6.87	F2	8	..	37546i	96	2535	56.6	- 4 4	6.78	7.96	K5	7	..	19226b
47	1305	56.3	+53 30	7.08	8.08	Ko	6	..	37705i	97	2789	56.6	- 6 42	9.2	10.2	Ko	2	..	19226b
48	1991	56.3	+17 44	8.0	8.8	G5	2	..	38283i	98	7634	56.6	-24 35	7.40	8.1	Fo	7	..	13144b
49	2015	56.3	+14 5	10.5	11.5	K	1	..	5396m	99	6152	56.6	-27 53	8.0	9.8	G5	2	..	18994b
50	2087	56.3	+ 6 2	6.31	7.31	Ko	7	..	37606i	100	5272	56.6	-35 42	8.9	9.5	Ao	3	..	40081b

THE HENRY DRAPER CATALOGUE.

77300

8<sup>h</sup> 56<sup>m</sup>.6

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	5127	56.6	-39 5	8.6	9.1	G5	2	..	13055b	51	1993	56.9	+16 51	9.5	9.6	A2	4	..	5396m
2	5058	56.6	-39 58	9.10	9.1	Ao	3	1,3	19156b	52	2125	56.9	+ 3 40	8.2	9.0	G5	3	..	37606i
3	4579	56.6	-47 15	9.1	9.0	A2	4	..	38415b	53	2449	56.9	- 0 6	5.80	6.80	Ko	8	..	37606i
4	4580	56.6	-47 30	9.8	10.2	F8	1	..	38415b	54	2112	56.9	- 0 43	7.7	8.2	F8	8	..	19392b
5	3409	56.6	-51 7	7.3	7.7	A2	2	..	4985b	55	2793	56.9	- 6 54	10.0	10.4	F5	2	..	19226b
6	1958	56.6	-54 38	8.8	9.4	Go	3	..	40275b	56	2700	56.9	- 7 19	9.8	10.8	Ko	1	..	19226b
7	1273	56.6	-60 52	9.4	10.2	G5	1	..	40096b	57	2722	56.9	-10 52	8.6	8.7	A2	6	..	19016b
8	991	56.6	-69 26	8.8	8.8	Ao	5	..	21452b	58	2744	56.9	-14 2	9.4	10.4	Ko	1	..	19016b
9	1272	56.7	+54 41	5.68	5.74	A2	..	2, R	56,86	59	2729	56.9	-14 47	8.6	9.2	Go	4	..	19016b
10	1906	56.7	+40 58	8.9	9.4	F8	2	..	38639i	60	2670	56.9	-21 40	8.8	10.2	K	1	..	13144b
11	1923	56.7	+31 46	8.1	9.3	K5	1	..	38630i	61	6647	56.9	-26 16	6.38	7.7	Ko	9	..	18994b
12	1858	56.7	+29 47	8.61	8.61	Ao	3	..	38173i	62	6161	56.9	-27 59	8.1	10.1	K2	2	..	18994b
13	1889	56.7	+26 16	7.28	8.28	Ko	4	..	38173i	63	6830	56.9	-28 22	8.4	9.5	Ko	3	..	18994b
14	2124	56.7	+ 3 4	7.01	7.07	A2	8	..	37606i	64	5486	56.9	-34 6	9.2	10.1	K2	1	..	40081b
15	2791	56.7	- 6 19	10.3	10.4	A2	1	..	19226b	65	5361	56.9	-37 49	9.3	10.4	K2	1	..	39925b
16	2720	56.7	-10 50	8.0	9.1	K2	4	..	19016b	66	5360	56.9	-38 2	7.05	7.3	B5	4	..	42246b
17	5357	56.7	-37 41	10.8	10.4	K5	1	..	39925b	67	4880	56.9	-42 55	9.0	9.7	Ko	2	..	38418b
18	5358	56.7	-37 42	9.7	9.5	Ao	3	..	13055b	68	2035	56.9	-53 11	9.7	9.7	B9	2	..	40275b
19	4816	56.7	-40 8	9.00	9.4	Ao	2	2,2	19156b	69	1326	56.9	-58 21	7.9	8.9	Ko	4	..	41151b
20	4875	56.7	-42 47	6.12	5.5	B3	5	..	4947b	70	1327	56.9	-58 42	5.17	5.45	Fo	..	R	28,203
21	4042	56.7	-49 10	7.38	8.4	Ko	7	..	38415b	71	1277	56.9	-60 56	8.9	9.4	G5	4	..	40096b
22	2030	56.7	-53 41	9.4	9.4	Ao	2	..	40275b	72	1142	56.9	-61 51	8.9	9.2	Ao	3	..	13026b
23	1881	56.7	-55 59	9.0	9.4	A2	2	..	40275b	73	978	56.9	-64 9	6.6	7.6	Ko	9	..	21452b
24	843	56.7	-70 38	6.8	7.9	K2	5	..	24527b	74	979	56.9	-64 21	9.4	9.5	A3	4	..	21452b
25	240	56.8	+83 17	9.2	9.8	G	2	..	38331i	75	460	56.9	-77 13	8.0	8.0	Ao	3	..	24452b
26	553	56.8	+68 30	8.6	8.6	Ao	4	..	38603i	76	1875	57.0	+43 10	9.2	9.7	F8	1	..	38639i
27	1633	56.8	+47 33	3.68	3.68	Ao	..	R	4544c	77	2039	57.0	+21 55	7.7	8.5	G5	3	..	37607i
28	1928	56.8	+10 31	8.6	9.4	G5	2	..	38198i	78	2103	57.0	+18 10	8.2	8.5	Fo	2	..	37607i
29	2768	56.8	- 2 24	9.2	10.3	K2	2	..	19392b	79	2519	57.0	- 4 38	8.4	9.6	K5	3	..	19226b
30	2699	56.8	- 8 9	9.2	10.0	G5	2	..	19226b	80	2794	57.0	- 6 28	9.2	10.4	K5	2	..	19226b
31	2528	56.8	-11 18	8.6	9.6	Ko	4	..	19016b	81	2701	57.0	- 7 59	7.31	8.31	Ko	6	..	19226b
32	2743	56.8	-14 6	8.2	8.2	Ao	8	..	19016b	82	6831	57.0	-28 27	8.0	9.0	K2	5	..	18994b
33	2671	56.8	-15 25	9.6	10.2	Go	2	..	46198b	83	4881	57.0	-42 58	10.2	9.4	Ao	3	..	38418b
34	2664	56.8	-16 52	9.8	10.2	F5	2	..	46198b	84	4823	57.0	-46 20	8.9	8.4	A5	5	2,4-	38415b
35	2596	56.8	-19 11	9.4	10.1	Ao	2	..	13144b	85	4318	57.0	-48 20	7.9	9.0	Ko	5	..	38415b
36	2595	56.8	-19 18	9.2	10.1	Go	1	..	13144b	86	1842	57.0	-52 48	8.8	9.7	G5	1	..	40275b
37	2669	56.8	-22 0	8.4	9.5	Go	2	..	13144b	87	1328	57.0	-59 5	8.9	8.8	A5	2	..	41151b
38	6797	56.8	-25 8	8.90	9.6	Ko	2	..	13144b	88	951	57.0	-66 17	9.1	9.2	A3	7	..	21452b
39	6157	56.8	-27 8	7.54	9.0	Ma	5	..	18994b	89	873	57.0	-68 46	9.4	9.5	A5	3	..	21452b
40	6156	56.8	-27 38	9.0	9.8	A2	4	..	18994b	90	1808	57.1	+30 31	7.89	7.95	A2	4	..	38173i
41	5483	56.8	-34 11	8.1	9.2	Ko	2	..	40081b	91	2041	57.1	+22 40	7.80	8.58	G5	3	..	37607i
42	4876	56.8	-42 57	10.0	9.4	Ao	2	..	38418b	92	1994	57.1	+17 4	9.5	10.3	G5	1	..	5396m
43	4839	56.8	-43 32	9.0	8.7	A2	3	..	38418b	93	1964	57.1	+15 4	10.5	11.3	G5	2	..	5396m
44	4822	56.8	-46 44	9.1	9.6	K2	3	..	38415b	94	2770	57.1	- 2 14	9.2	9.6	F5	4	..	19392b
45	4311	56.8	-48 58	10.9	9.4	Ao	3	..	38415b	95	2521	57.1	- 4 40	9.4	9.5	A3	3	..	19226b
46	1839	56.8	-52 54	9.9	9.9	A	1	..	40275b	96	2795	57.1	- 6 22	9.6	10.4	G5	1	..	19226b
47	2032	56.8	-53 51	7.0	8.2	Fo	6	0,5	40275b	97	6163	57.1	-27 56	7.9	8.6	Ao	8	..	18994b
48	773	56.8	-72 1	7.9	8.2	F2	3	E	22988b	98	5062	57.1	-39 32	9.7	9.7	F8	1	..	39925b
49	1043	56.9	+62 40	8.7	9.0	F2	2	..	37517i	99	4882	57.1	-42 24	10.0	9.2	A2	3	..	38418b
50	2029	56.9	+24 51	5.45	5.45	Ao	..	2, R	56,86	100	4826	57.1	-46 52	9.2	8.7	Ao	6	..	38415b

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

77400

8<sup>h</sup> 57<sup>m</sup>.1

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	4827	57.1	-46 57	10.0	10.5	Mb	..	..	M	51	5495	57.4	-35 2	8.15	9.2	K2	4	..	40081b
2	4582	57.1	-47 19	9.2	9.8	Ko	1	..	38415b	52	4716	57.4	-41 58	9.3	8.6	Ao	2	..	19156b
3	4043	57.1	-49 8	11.5	9.9	Fo	1	..	38415b	53	4774	57.4	-45 15	8.29	8.1	A3	5	..	19156b
4	1844	57.1	-52 18	9.6	9.7	A2	1	..	40275b	54	1146	57.4	-62 39	9.2	10.2	Ko	1	..	40096b
5	1146	57.1	-61 29	8.3	9.1	G5	2	..	13026b	55	1145	57.4	-63 5	7.0	7.0	Ao	9	..	13026b
6	845	57.1	-70 45	7.4	8.5	K2	2	..	24527b	56	1891	57.5	+25 52	8.9	9.9	Ko	1	..	38173i
7	1993	57.2	+38 14	7.10	7.66	Go	6	..	37345i	57	2106	57.5	+17 59	8.4	9.0	Go	2	..	37607i
8	1800	57.2	+33 17	7.08	7.50	F5	5	..	37345i	58	1889	57.5	+16 45	9.8	10.3	F8	2	..	5396m
9	2112	57.2	+8 53	8.0	8.1	A2	4	..	38198i	59	2189	57.5	-1 24	8.6	9.6	Ko	4	..	19392b
10	2772	57.2	-2 32	8.2	9.2	Ko	7	..	19392b	60	2797	57.5	-7 7	9.4	10.0	Go	1	..	19226b
11	2771	57.2	-3 1	9.2	10.0	G5	3	..	19392b	61	7996	57.5	-23 21	8.6	9.0	G5	2	..	13144b
12	2522	57.2	-5 3	8.25	8.31	A2	6	..	19226b	62	6661	57.5	-26 11	7.24	8.3	F8	8	..	18994b
13	2694	57.2	-5 30	9.6	10.7	K2	2	..	19226b	63	4889	57.5	-42 41	10.0	9.7	Ko	2	..	38418b
14	2717	57.2	-18 6	9.2	9.2	A	1	..	41219b	64	3420	57.5	-51 10	6.72	6.6	B3	..	2,4-	28,203
15	7093	57.2	-30 19	7.5	9.6	K2	1	..	18927b	65	1889	57.5	-55 12	8.66	8.9	Fo	3	2,3	40275b
16	7094	57.2	-30 20	9.6	9.6	Ko	1	..	18927b	66	1822	57.5	-57 52	8.2	8.2	Ao	4	..	41151b
17	5368	57.2	-37 23	8.4	9.6	G5	3	..	39925b	67	1147	57.5	-62 17	9.9	10.2	Fo	1	..	40096b
18	5137	57.2	-38 42	9.9	9.7	A2	3	..	39925b	68	2035	57.6	+23 1	8.08	8.86	G5	2	..	37607i
19	4849	57.2	-43 10	9.4	8.7	A5	2	..	38418b	69	2017	57.6	+14 19	10.5	11.5	Ko	2	..	5396m
20	4848	57.2	-43 28	9.0	8.4	A3	4	..	38418b	70	2526	57.6	-4 16	9.1	9.9	G5	2	..	19226b
21	4321	57.2	-48 36	9.8	9.3	B	3	R	38415b	71	2724	57.6	-10 30	8.5	9.0	F8	5	..	19016b
22	2040	57.2	-53 43	8.9	10.9	A2	1	..	40275b	72	6662	57.6	-26 53	8.2	8.4	A3	6	..	18994b
23	1886	57.2	-55 19	8.8	9.1	Fo	2	2,2	41151b	73	5282	57.6	-35 41	9.7	9.5	A2	3	..	40081b
24	1078	57.2	-63 34	9.6	9.9	Fo	3	..	21452b	74	5142	57.6	-38 31	11.0	9.9	Ao	1	..	39925b
25	552	57.2	-75 52	8.1	8.7	Go	5	..	21453b	75	4720	57.6	-41 28	5.54	5.42	B5	..	2,6	28,203
26	504	57.3	+68 52	6.95	7.09	A5	6	0,7	38602i	76	4586	57.6	-47 19	11.5	10.2	A2	1	..	38415b
27	717	57.3	+64 50	9.40	9.68	F	1	R	37517i	77	1962	57.6	-56 55	8.1	8.8	F2	3	..	41151b
28	716	57.3	+64 27	7.50	8.50	Ko	5	..	37517i	78	1336	57.6	-58 17	8.6	9.1	G5	2	..	41151b
29	1815	57.3	+44 6	8.8	9.1	F2	4	..	38639i	79	875	57.6	-68 27	9.0	10.0	Ko	2	..	21452b
30	5369	57.3	-37 49	10.6	10.1	Ao	1	..	39925b	80	1169	57.7	+58 30	8.8	9.8	Ko	1	..	37705i
31	5139	57.3	-38 32	7.9	8.5	K2	5	..	13055b	81	1910	57.7	+40 56	8.6	9.6	Ko	2	5,1	38639i
32	5065	57.3	-39 28	10.3	9.7	F5	1	..	39925b	82	1995	57.7	+37 57	8.6	9.2	Go	2	..	37345i
33	4772	57.3	-45 30	8.3	8.5	A3	5	..	19156b	83	1892	57.7	+26 16	8.6	9.7	K2	1	..	38173i
34	4325	57.3	-48 36	9.8	9.4	Go	2	..	38415b	84	2451	57.7	+0 49	7.79	7.77	B9	6	..	37606i
35	4045	57.3	-50 5	10.0	10.2	G5	1	..	38415b	85	2774	57.7	-2 33	9.6	10.6	Ko	1	..	19392b
36	3416	57.3	-51 16	9.1	9.4	A5	4	..	40275b	86	5376	57.7	-37 42	8.3	9.5	Go	3	..	13055b
37	3419	57.3	-51 51	10.0	9.9	A3	1	..	40275b	87	4335	57.7	-48 7	10.9	9.9	Ao	3	..	38415b
38	3417	57.3	-52 4	9.8	10.1	A	1	..	40275b	88	4048	57.7	-49 30	11.5	10.2	Ko	1	..	38415b
39	2042	57.3	-53 46	9.1	9.8	Ma	1	..	40275b	89	4050	57.7	-50 3	8.08	9.1	Ko	5	..	38415b
40	548	57.3	-73 32	7.3	8.4	K2	3	..	24452b	90	2050	57.7	-53 58	7.1	7.6	B9	7	1,5	40275b
41	283	57.4	+80 14	9.0	10.0	Ko	2	..	37493i	91	1963	57.7	-57 4	8.5	9.4	K2	1	..	41151b
42	354	57.4	+77 3	9.4	10.2	G5	1	..	37714i	92	953	57.7	-66 32	9.9	10.9	Ko	2	..	21452b
43	2193	57.4	+39 8	6.70	8.05	Mb	..	0,5	56,86	93	1018	57.7	-67 45	6.6	6.6	B9	3	..	5899b
44	1708	57.4	+27 37	8.7	9.8	K2	2	..	38173i	94	489	57.8	+70 55	8.9	9.5	G	3	..	37706i
45	2066	57.4	+7 41	6.07	7.07	Ko	6	..	37606i	95	572	57.8	+67 7	9.0	9.6	G	2	..	37517i
46	2116	57.4	-1 5	8.9	8.9	Ao	6	..	19392b	96	1604	57.8	+50 37	9.4	9.5	A2	2	..	38240i
47	2188	57.4	-1 58	7.6	8.0	F5	9	..	19392b	97	1817	57.8	+43 51	8.0	9.1	K2	5	..	38639i
48	2695	57.4	-6 5	9.8	10.3	F8	1	..	19226b	98	1876	57.8	+42 56	9.2	9.3	A2	3	..	38639i
49	2671	57.4	-22 8	9.2	10.1	A	1	..	13144b	99	1911	57.8	+41 45	8.6	9.6	Ko	3	..	38639i
50	7646	57.4	-25 3	7.72	8.3	Ko	4	..	13144b	100	1891	57.8	+15 54	9.8	10.4	Go	2	..	5396m

THE HENRY DRAPER CATALOGUE.

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8<sup>h</sup> 57<sup>m</sup>.8

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	2018	57.8	+14 35	7.8	8.8	Ko	7	2,3 R	5396m	51	4898	58.1	-42 51	9.2	9.2	G5	3	..	38418b
2	2704	57.8	- 8 6	8.8	9.4	Go	3	..	19226b	52	4589	58.1	-47 12	9.2	10.2	K5	1	..	38415b
3	2564	57.8	- 8 34	8.5	9.1	Go	4	..	19226b	53	4590	58.1	-47 27	9.6	9.6	Go	2	..	38415b
4	2760	57.8	-20 55	8.4	9.6	Ko	1	..	13144b	54	1148	58.1	-62 36	8.0	8.0	B8	4	..	13026b
5	7649	57.8	-25 1	9.15	9.8	K2	2	..	13144b	55	820	58.2	+63 26	8.7	9.0	Fo	3	..	37517i
6	6171	57.8	-27 25	7.94	8.6	F5	7	..	18994b	56	1820	58.2	+43 52	8.1	8.5	F5	7	..	38639i
7	6172	57.8	-27 46	7.5	8.6	A2	6	..	18994b	57	1683	58.2	+28 18	6.34	6.34	Ao	6	..	38173i
8	5988	57.8	-32 28	10.6	10.2	A	1	..	40081b	58	2111	58.2	+18 24	8.4	8.5	A5	2	..	37607i
9	5285	57.8	-35 15	9.40	9.2	B9	4	..	40081b	59	2032	58.2	+13 40	10.1	11.1	Ko	3	..	5396m
10	4856	57.8	-43 19	9.2	9.9	Ko	1	..	38418b	60	1972	58.2	+11 3	9.1	9.9	G5	1	..	38198i
11	4836	57.8	-46 52	7.7	7.5	Fo	8	..	38415b	61	6815	58.2	-25 51	9.0	9.9	Ko	3	..	24494b
12	3761	57.8	-50 7	8.92	9.0	Go	5	..	38415b	62	5289	58.2	-36 48	10.8	10.1	Ao	1	..	39925b
13	553	57.8	-76 0	7.9	8.7	G5	6	..	21453b	63	5149	58.2	-38 27	8.9	8.5	Go	4	..	13055b
14	1904	57.9	+36 43	9.1	9.4	F2	2	..	37345i	64	5151	58.2	-39 4	9.7	9.5	B9	2	..	39925b
15	1965	57.9	+20 58	8.7	9.7	Ko	1	..	37607i	65	4734	58.2	-41 36	9.5	9.2	A2	2	..	19156b
16	2145	57.9	+19 46	8.80	9.87	K2	1	..	37607i	66	4057	58.2	-49 11	7.4	7.8	B8	9	..	38415b
17	1933	57.9	+10 42	8.4	8.7	Fo	3	..	38198i	67	4054	58.2	-49.54	9.0	9.6	K2	2	..	38415b
18	2068	57.9	+ 7 12	6.94	7.94	Ko	4	..	37606i	68	1898	58.2	-56 5	8.8	8.8	Ao	4	2,2	40275b
19	2132	57.9	+ 2 28	8.2	8.7	F8	4	..	37606i	69	1224	58.2	-59 33	8.6	9.2	G5	1	..	41151b
20	2565	57.9	- 9 0	8.8	9.8	Ko	2	..	19226b	70	1478	58.3	+51 14	6.73	7.07	F2	6	..	38240i
21	4861	57.9	-43 52	8.8	8.5	G5	3	0,3	19156b	71	2147	58.3	+19 5	8.4	9.2	G5	2	..	37607i
22	4338	57.9	-49 4	10.9	10.2	Ko	1	..	38415b	72	1934	58.3	+10 17	8.2	8.5	F2	4	..	38198i
23	3762	57.9	-50 44	9.0	9.0	Ao	2	..	40296b	73	2568	58.3	- 8 35	7.8	7.9	A2	7	..	19226b
24	1893	57.9	-55 58	9.1	9.7	A2	1	..	40275b	74	2772	58.3	-12 40	9.4	9.9	F8	2	..	19016b
25	1968	57.9	-56 43	8.1	8.5	B5	3	..	41151b	75	2732	58.3	-14 28	8.6	9.7	K2	3	..	19016b
26	1824	57.9	-57 33	8.8	9.1	A3	2	..	41151b	76	2478	58.3	-22 47	8.7	9.8	Go	2	..	13144b
27	1019	57.9	-67 54	8.6	9.4	G5	3	..	21452b	77	6851	58.3	-28 37	9.8	10.1	B9	1	..	24494b
28	1477	58.0	+51 6	9.5	10.3	G5	2	..	38240i	78	6828	58.3	-31 54	8.8	9.0	F2	4	..	40081b
29	1605	58.0	+50 19	9.4	10.0	Go	1	..	38240i	79	5291	58.3	-36 37	8.7	10.0	K5	1	..	39925b
30	1912	58.0	+41 1	8.8	9.8	Ko	1	..	38639i	80	5154	58.3	-39 1	6.30	7.5	Ko	3	0,10	42246b
31	2019	58.0	+14 26	9.8	10.8	Ko	2	..	5396m	81	4838	58.3	-40 10	6.75	7.6	Bo	6	0,3	19156b
32	2776	58.0	- 2 52	9.1	9.2	A2	4	..	19392b	82	4864	58.3	-43 26	9.8	9.6	A5	2	..	38418b
33	2771	58.0	-12 22	9.2	9.7	F8	1	..	19016b	83	1825	58.3	-57 32	8.2	9.4	Ma	1	..	41151b
34	2678	58.0	-15 15	9.11	9.89	G5	2	0,1	19016b	84	1079	58.3	-63 40	10.6	10.7	A3	2	..	21452b
35	6665	58.0	-26 30	9.4	9.8	A2	3	..	18994b	85	594	58.4	+66 44	9.7	9.8	A3	2	..	37517i
36	5289	58.0	-35 18	7.5	7.7	B9	7	..	40081b	86	1860	58.4	+29 41	7.86	9.21	Ma	2	..	38173i
37	5382	58.0	-37 47	9.5	9.5	A2	2	..	13055b	87	2105	58.4	+ 4 51	8.21	9.21	Ko	2	..	37606i
38	4339	58.0	-48 30	10.0	9.6	Fo	3	..	38415b	88	2545	58.4	- 4 2	8.0	8.0	Ao	8	..	19226b
39	355	58.1	+77 31	8.8	9.1	Fo	5	..	37714i	89	2698	58.4	- 5 32	8.4	8.8	F5	4	..	19226b
40	819	58.1	+63 14	8.5	9.1	G	1	..	37517i	90	2746	58.4	-13 36	7.6	8.8	K5	5	..	19016b
41	2260	58.1	+20 29	8.3	8.7	F5	5	..	37607i	91	7117	58.4	-30 38	7.49	8.1	A2	7	..	40081b
42	2021	58.1	+14 27	10.1	11.1	Ko	1	..	5396m	92	5686	58.4	-33 51	7.9	8.1	A2	5	..	40081b
43	2104	58.1	+ 5 49	8.6	9.2	Go	2	..	37606i	93	4904	58.4	-42 41	10.2	9.7	Ao	2	..	38418b
44	6813	58.1	-25 40	8.4	9.8	Ko	3	..	24494b	94	4345	58.4	-48 21	9.0	9.0	Go	5	..	38415b
45	6176	58.1	-27 15	9.1	9.6	F2	3	..	18994b	95	4060	58.4	-49 51	8.6	8.4	B8	6	..	38415b
46	6846	58.1	-28 13	9.6	9.5	Ao	4	..	18994b	96	2055	58.4	-53 9	9.0	9.1	A3	3	..	40275b
47	7055	58.1	-29 26	8.4	9.3	Ao	3	..	24494b	97	1154	58.4	-62 0	10.5	10.5	Ao	1	..	40096b
48	5681	58.1	-33 34	9.9	9.4	A2	2	..	40081b	98	1151	58.4	-62 57	9.2	10.6	Ma	2	..	40096b
49	5282	58.1	-36 29	8.4	9.2	Ao	4	..	13055b	99	1361	58.5	+55 56	7.94	8.50	Go	5	..	37705i
50	5082	58.1	-39 27	9.7	9.7	F	2	R	39925b	100	1606	58.5	+50 42	8.6	9.4	G5	2	..	38240i

## ANNALS OF HARVARD COLLEGE OBSERVATORY.

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8<sup>h</sup> 58<sup>m</sup>.5

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1801	58.5	+48 55	5.59	6.01	F5	8	..	38240i	51	4788	58.7	-46 4	9.1	9.0	Ao	5	..	38415b
2	1939	58.5	+34 49	9.07	9.85	G5	1	..	37345i	52	4850	58.7	-46 32	10.0	9.6	A2	3	..	38415b
3	2780	58.5	-2 58	9.1	9.2	A2	5	..	19392b	53	3430	58.7	-51 48	5.42	5.40	B9	..	0.8	28,203
4	2801	58.5	-6 22	9.4	10.0	Go	2	..	19226b	54	2062	58.7	-53 43	8.5	9.1	Fo	3	..	40275b
5	2569	58.5	-8 37	8.7	8.8	A3	5	..	19226b	55	1900	58.7	-55 15	9.06	8.8	Ao	3	1,3	41151b
6	2733	58.5	-14 51	8.4	8.7	Fo	6	0.6	18995b	56	1021	58.7	-67 42	7.2	7.2	B9	10	..	21452b
7	2734	58.5	-15 3	9.4	10.5	K2	1	..	19016b	57	339	58.8	+76 1	9.47	10.25	G5	3	..	37714i
8	2727	58.5	-17 15	9.2	9.2	Ao	6	..	13154b	58	1821	58.8	+44 29	8.8	9.8	Ko	2	..	38639i
9	2603	58.5	-20 10	7.88	8.0	B9	6	..	13144b	59	1802	58.8	+33 16	8.9	9.9	Ko	2	..	38634i
10	8008	58.5	-23 51	8.6	8.0	Ao	5	..	13144b	60	1837	58.8	+32 47	6.42	6.56	A5	7	..	37345i
11	5294	58.5	-36 26	9.5	10.1	G5	1	..	39925b	61	2114	58.8	+18 41	8.8	9.4	G	1	..	37607i
12	5292	58.5	-36 50	10.1	9.8	A2	2	..	39925b	62	2022	58.8	+14 41	9.29	10.07	G5	3	..	5396m
13	4593	58.5	-47 30	10.9	10.2	Ao	1	..	38415b	63	2035	58.8	+13 37	10.1	10.9	G5	3	..	5396m
14	1858	58.5	-52 31	9.3	9.4	A2	2	..	40275b	64	2570	58.8	-8 11	8.6	9.6	Ko	3	..	19226b
15	1283	58.5	-60 34	5.80	7.6	Ko	4	..	42241b	65	6829	58.8	-25 7	6.66	7.2	B8	6	1,10	11015b
16	877	58.5	-68 21	8.1	9.1	Ko	5	..	21452b	66	5301	58.8	-36 56	10.3	10.1	A3	1	..	39925b
17	848	58.5	-70 23	9.1	9.7	Go	2	..	21452b	67	5161	58.8	-38 13	10.3	10.0	Ao	1	..	39925b
18	400	58.5	-78 21	9.0	9.0	Ao	5	..	21453b	68	5097	58.8	-39 16	9.7	9.7	Ko	1	..	39925b
19	1312	58.6	+55 48	7.64	7.92	Fo	6	..	37705i	69	4873	58.8	-43 35	8.5	7.6	B9	7	..	38418b
20	1684	58.6	+28 50	9.1	9.2	A5	1	..	38630i	70	4349	58.8	-48 53	10.9	9.9	Go	1	..	38415b
21	2034	58.6	+25 47	8.9	9.7	G5	1	..	38173i	71	4064	58.8	-49 42	10.0	9.9	Ao	2	..	38415b
22	1893	58.6	+16 15	10.1	10.6	F8	3	..	5396m	72	1060	58.8	-65 58	8.6	8.6	B9	5	..	21452b
23	1969	58.6	+14 51	9.14	9.64	F8	5	0.1	5396m	73	1894	58.9	+16 19	10.5	11.6	K2	1	..	5396m
24	1974	58.6	+11 34	8.4	9.4	Ko	3	..	38198i	74	2709	58.9	-7 59	9.2	9.3	A2	3	..	19226b
25	2192	58.6	-1 59	8.4	8.8	F5	6	..	19392b	75	2539	58.9	-11 31	9.2	10.0	G5	3	..	19016b
26	2676	58.6	-21 10	9.2	10.1	A	1	..	13144b	76	2537	58.9	-12 9	8.4	8.7	Fo	5	..	19016b
27	6826	58.6	-25 14	8.10	8.0	Fo	7	..	13144b	77	2751	58.9	-14 2	7.9	9.0	K2	5	..	19016b
28	6185	58.6	-27 48	7.34	8.3	Ma	5	..	18994b	78	2558	58.9	-18 24	9.2	9.5	Fo	2	..	46198b
29	6186	58.6	-27 54	9.1	9.8	Ko	3	..	18994b	79	6682	58.9	-26 32	9.1	9.8	G5	2	..	24494b
30	5517	58.6	-34 25	9.3	9.5	A3	2	..	40081b	80	5521	58.9	-34 32	9.7	10.0	A2	1	R	40081b
31	5296	58.6	-36 9	9.3	10.1	Ko	1	..	39925b	81	5162	58.9	-38 48	10.8	10.0	Ao	1	..	39925b
32	4845	58.6	-40 21	9.3	9.7	A2	1	..	39925b	82	5101	58.9	-39 20	10.1	9.7	Fo	1	..	39925b
33	4739	58.6	-42 2	9.2	9.7	K2	1	..	19156b	83	4850	58.9	-40 38	8.4	8.9	G5	3	..	39925b
34	4594	58.6	-47 16	10.9	10.1	B9	1	..	38415b	84	4906	58.9	-42 19	7.6	7.5	Ao	8	..	38418b
35	386	58.7	+74 28	8.6	9.1	F8	5	..	37714i	85	4600	58.9	-47 34	9.6	10.2	G5	1	..	38415b
36	1607	58.7	+50 42	8.1	8.9	G5	4	..	38240i	86	4601	58.9	-47 50	10.2	10.1	G5	1	..	38415b
37	2147	58.7	+39 55	9.27	10.05	G5	1	..	38639i	87	4067	58.9	-49 15	10.9	8.7	A2	4	..	38415b
38	2034	58.7	+13 39	10.1	10.9	G5	1	..	5396m	88	4068	58.9	-50 5	9.4	9.1	Fo	4	..	38415b
39	2547	58.7	-4 1	8.4	8.7	F2	5	..	19226b	89	1862	58.9	-52 31	8.3	8.4	B9	5	..	40275b
40	2530	58.7	-4 49	6.74	6.74	Ao	10	..	19226b	90	1287	58.9	-60 30	8.8	8.3	Ao	2	..	41151b
41	2707	58.7	-7 15	9.2	9.6	F5	3	..	19226b	91	1286	58.9	-61 3	9.4	10.6	K5	1	..	40096b
42	2555	58.7	-18 26	9.0	9.1	A5	3	..	46198b	92	1217	59.0	+59 45	6.19	6.19	Ao	10	..	37705i
43	6866	58.7	-28 51	9.1	9.9	A2	2	..	24494b	93	1997	59.0	+38 50	8.7	9.0	F2	2	..	37345i
44	6833	58.7	-31 31	8.8	8.8	F2	5	..	40081b	94	2036	59.0	+25 1	8.3	9.3	Ko	3	0,2	38630i
45	6835	58.7	-32 3	6.90	7.3	B9	6	..	9427b	95	2571	59.0	-8 18	9.6	9.6	Ao	2	..	19226b
46	5300	58.7	-35 29	9.3	9.2	A	2	..	39925b	96	2772	59.0	-20 38	9.2	9.8	Ko	1	..	13144b
47	5299	58.7	-35 30	9.3	9.2	A	2	..	39925b	97	2678	59.0	-21 46	8.6	9.8	F5	2	..	13144b
48	5394	58.7	-37 33	8.9	9.2	Ao	4	..	13055b	98	2479	59.0	-22 36	8.36	8.6	A2	5	..	13144b
49	4846	58.7	-40 26	9.9	9.9	Ao	1	..	39925b	99	6007	59.0	-32 15	9.5	10.2	K2	2	..	40081b
50	4905	58.7	-42 7	10.0	9.4	A	1	..	19156b	100	5308	59.0	-35 52	10.3	10.0	A2	1	..	39925b



THE HENRY DRAPER CATALOGUE.

77700

8<sup>h</sup> 59<sup>m</sup>.0

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	5165	59.0	-39 4	9.9	9.7	Fo	2	..	39925b	51	6197	59.3	-27 14	9.3	10.1	K5	1	..	24494b
2	4907	59.0	-42 19	11.5	9.2	B8	2	..	39925b	52	5700	59.3	-33 49	8.7	9.0	G5	3	..	40081b
3	4603	59.0	-48 1	10.2	9.9	A2	2	..	38415b	53	5172	59.3	-38 13	7.5	9.1	Ma	2	..	13055b
4	1903	59.0	-56 4	9.1	9.7	Ma	2	..	40275b	54	4913	59.3	-42 29	9.6	8.3	Ao	6	..	38418b
5	1158	59.0	-61 42	9.4	9.7	Fo	3	..	40096b	55	4878	59.3	-44 2	9.2	9.3	A3	3	..	38418b
6	1276	59.1	+54 41	9.26	9.68	F5	1	..	37705i	56	1867	59.3	-52 27	9.4	9.4	B9	3	..	40275b
7	1822	59.1	+44 20	8.9	9.9	Ko	2	..	38639i	57	1022	59.3	-67 33	8.8	9.6	G5	6	..	21452b
8	1971	59.1	+15 16	9.5	10.3	G5	2	..	5396m	58	850	59.3	-70 31	8.2	9.4	K5	4	..	21452b
9	1960	59.1	+12 37	8.8	9.9	K2	1	..	38283i	59	1961	59.4	+11 57	9.1	9.7	G	1	..	38198i
10	1976	59.1	+11 15	7.6	8.7	K2	4	..	38198i	60	2136	59.4	+2 19	7.7	8.7	Ko	4	..	37606i
11	2133	59.1	+3 27	8.8	9.6	G5	1	..	37109i	61	2531	59.4	-4 36	9.2	9.6	F5	1	..	19226b
12	2134	59.1	+3 26	8.4	9.2	G5	2	..	37109i	62	2573	59.4	-8 59	9.1	9.1	Ao	3	..	19226b
13	2782	59.1	-2 35	9.1	9.6	F8	5	..	19392b	63	5702	59.4	-33 40	9.2	9.9	F5	1	..	40081b
14	2712	59.1	-7 48	9.2	10.3	K2	1	..	19226b	64	5318	59.4	-35 59	9.3	9.2	Ao	2	..	13055b
15	7126	59.1	-30 43	8.8	9.0	A2	3	..	40081b	65	5312	59.4	-36 7	9.3	9.5	Ao	2	..	13055b
16	5313	59.1	-35 47	9.9	10.1	Ao	1	..	39925b	66	5313	59.4	-36 58	8.7	9.5	G5	2	..	39925b
17	5308	59.1	-36 14	8.9	9.2	A2	3	..	13055b	67	5174	59.4	-38 16	7.4	8.6	Ko	4	..	13055b
18	4855	59.1	-46 10	8.9	8.7	B2	5	..	38415b	68	5069	59.4	-44 9	10.5	9.6	Ao	1	..	38418b
19	4602	59.1	-47 27	10.9	10.1	Ao	2	..	38415b	69	4861	59.4	-46 34	9.6	9.0	B8	3	..	38415b
20	1972	59.1	-56 58	8.7	9.1	Ao	3	2,3	41151b	70	1608	59.5	+50 1	7.52	7.40	B5	6	..	38240i
21	1349	59.1	-58 59	9.4	9.5	A2	1	..	41151b	71	1675	59.5	+45 16	8.5	9.5	Ko	3	..	38639i
22	776	59.1	-71 50	9.6	9.7	A2	2	E	21452b	72	2199	59.5	+38 50	8.1	8.5	F5	3	..	37345i
23	767	59.1	-72 50	8.5	9.5	Ko	1	..	22988b	73	1896	59.5	+16 29	10.1	11.1	Ko	2	..	5396m
24	441	59.2	+72 43	7.7	8.1	F5	6	..	37714i	74	1974	59.5	+15 36	9.1	10.2	K2	2	..	5396m
25	688	59.2	+65 23	8.8	9.3	F8	3	..	37517i	75	2024	59.5	+14 10	8.8	8.9	A3	5	1,2	5396m
26	1101	59.2	+60 56	7.7	8.7	Ko	4	..	37705i	76	2036	59.5	+13 45	7.6	8.4	G5	5	5,8	38283i
27	1313	59.2	+55 9	9.2	9.8	G	1	..	37705i	77	2115	59.5	+3 56	7.5	7.5	Ao	7	..	37606i
28	1308	59.2	+53 40	8.5	8.5	Ao	3	..	37705i	78	2230	59.5	+1 18	7.4	7.7	Fo	5	..	37606i
29	1895	59.2	+26 34	7.9	9.0	K2	2	..	38173i	79	2555	59.5	-3 38	8.4	8.5	A5	4	..	19226b
30	2040	59.2	+23 16	7.18	7.74	Go	5	..	37607i	80	2732	59.5	-10 16	9.06	10.24	K5	1	..	18995b
31	1973	59.2	+15 47	9.1	9.9	G5	3	5,1	5396m	81	2777	59.5	-12 27	9.0	10.0	Ko	2	..	19016b
32	1972	59.2	+15 41	9.8	10.8	Ko	2	..	5396m	82	2753	59.5	-13 54	8.8	9.8	Ko	3	..	19016b
33	2072	59.2	+6 51	8.8	10.2	Ma	..	..	M	83	2738	59.5	-14 32	9.4	9.9	F8	3	..	46198b
34	2783	59.2	-2 28	9.4	10.0	Go	3	..	19392b	84	2737	59.5	-14 49	9.4	10.5	K2	1	..	46198b
35	2672	59.2	-17 6	6.84	7.84	Ko	7	..	13154b	85	2730	59.5	-18 9	8.2	8.3	A3	4	..	13154b
36	6196	59.2	-27 45	8.0	8.3	Ao	8	..	18994b	86	2485	59.5	-22 59	9.2	9.8	Ao	2	..	13144b
37	5698	59.2	-33 12	6.69	7.3	Ao	7	..	9427b	87	8025	59.5	-23 27	8.4	8.6	A2	5	..	13144b
38	5526	59.2	-34 12	8.7	9.5	A3	3	..	40081b	88	5705	59.5	-33 17	7.8	8.1	A2	7	..	40081b
39	4877	59.2	-43 51	8.4	8.2	Ao	5	..	38418b	89	5317	59.5	-36 16	8.3	9.2	G5	3	..	13055b
40	5064	59.2	-44 15	8.5	8.4	Ao	4	..	38418b	90	5410	59.5	-38 0	10.1	10.1	G5	1	..	39925b
41	4798	59.2	-45 47	9.8	9.3	Ao	3	..	38415b	91	4756	59.5	-41 39	8.6	8.6	A3	5	..	38418b
42	4358	59.2	-49 0	10.0	9.9	F5	2	..	38415b	92	3781	59.5	-50 21	10.2	9.9	Ao	2	..	38415b
43	4070	59.2	-49 44	10.5	10.1	Fo	1	..	38415b	93	3782	59.5	-50 26	8.4	8.7	Ao	7	..	38415b
44	996	59.2	-69 20	10.1	10.7	G	2	R	21452b	94	1871	59.5	-52 30	10.1	10.1	A	1	..	40275b
45	1905	59.3	+36 36	6.88	7.16	Fo	7	..	37345i	95	1982	59.5	-54 38	7.6	8.0	Ao	6	0,8	41151b
46	2553	59.3	-3 20	8.5	8.6	A5	5	..	19226b	96	984	59.5	-64 32	7.9	9.0	K2	6	..	21452b
47	2806	59.3	-6 39	10.3	10.6	Fo	1	..	19226b	97	878	59.5	-68 51	9.6	10.6	Ko	2	..	21452b
48	2605	59.3	-19 26	8.6	9.3	F8	3	..	13144b	98	405	59.5	-78 25	9.2	10.2	Ko	4	..	21453b
49	2482	59.3	-23 8	9.1	9.8	Ao	2	..	13144b	99	24	59.5	-89 15	9.7	10.7	K	1	..	22578b
50	6838	59.3	-25 45	8.2	10.1	K5	3	..	24494b	100	573	59.6	+67 17	5.33	6.51	K5	8	R	37517i

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8<sup>h</sup> 59<sup>m</sup>.6

H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.	H.D.	DM.	R.A. 1900	Dec. 1900	Ptm.	Ptg.	Sp.	Int.	Rem.	Pl. No.
1	1482	59.6	+51 3	8.6	9.4	G5	3	..	38240i	37	1898	59.8	+16 18	8.6	9.6	Ko	5	..	5396m
2	1914	59.6	+41 27	9.4	10.4	Ko	1	..	38639i	38	2194	59.8	- 1 49	8.6	9.8	K5	3	..	19392b
3	1963	59.6	+11 58	8.6	9.4	G5	3	..	38198i	39	2778	59.8	-12 40	9.6	9.7	A2	2	..	19016b
4	2159	59.6	+ 8 13	9.1	9.1	Ao	2	..	38198i	40	2678	59.8	-16 54	9.6	9.9	Fo	2	..	46198b
5	2193	59.6	- 2 5	9.12	9.18	A2	7	..	19392b	41	8030	59.8	-23 51	7.6	8.0	A3	7	..	13144b
6	2732	59.6	-17 18	9.2	10.2	Ko	2	..	46198b	42	7086	59.8	-29 22	8.6	8.8	A5	3	..	24494b
7	6015	59.6	-32 30	9.7	10.2	Ko	1	..	40081b	43	6860	59.8	-31 31	9.0	9.6	Ko	2	..	40081b
8	5707	59.6	-33 19	9.7	9.6	A5	2	..	40081b	44	5187	59.8	-38 38	8.6	9.2	F8	3	..	13055b
9	5179	59.6	-38 54	10.1	10.0	Ao	1	..	39925b	45	5186	59.8	-39 4	9.2	9.7	A2	3	..	39925b
10	4856	59.6	-40 35	9.9	10.0	F8	1	..	39925b	46	5118	59.8	-39 44	10.3	9.5	Fo	1	..	39925b
11	4882	59.6	-43 44	10.2	10.2	Ko	1	..	38418b	47	5121	59.8	-39 49	8.9	9.7	K2	1	..	39925b
12	5072	59.6	-44 59	9.39	8.7	Ao	3	..	19156b	48	4762	59.8	-41 52	8.9	8.5	G5	5	..	38418b
13	4613	59.6	-47 37	10.0	9.8	F2	2	..	38415b	49	4885	59.8	-43 40	9.4	8.8	Ao	4	..	38418b
14	4072	59.6	-49 52	10.5	10.2	Ko	1	..	38415b	50	5073	59.8	-44 31	10.5	9.4	A2	1	..	38418b
15	3441	59.6	-51 23	10.2	9.9	A	1	..	40275b	51	4868	59.8	-46 37	10.2	9.8	Ao	2	..	38415b
16	954	59.6	-66 56	10.1	10.1	Ao	3	..	21452b	52	4368	59.8	-48 7	8.8	9.1	B8	4	R	38415b
17	362	59.7	+75 29	9.00	9.28	Fo	3	..	37714i	53	4367	59.8	-48 35	10.2	9.4	Ao	3	..	38415b
18	1218	59.7	+59 17	7.6	8.6	Ko	3	..	37705i	54	3784	59.8	-50 10	8.6	9.7	K5	3	..	38415b
19	1309	59.7	+53 23	7.57	8.35	G5	3	..	37705i	55	852	59.8	-70 27	9.1	9.5	F5	3	..	21452b
20	1472	59.7	+46 34	8.7	9.7	Ko	1	..	38639i	56	1965	59.9	+42 7	8.7	9.0	F2	2	..	38639i
21	1908	59.7	+36 49	9.1	9.5	F5	1	..	37345i	57	1899	59.9	+16 17	9.3	9.3	Ao	5	..	5396m
22	1865	59.7	+29 7	8.7	9.1	F5	2	..	38630i	58	2231	59.9	+ 1 26	8.2	9.2	Ko	2	..	37606i
23	2025	59.7	+14 39	8.99	9.99	Ko	4	0,1	5396m	59	2779	59.9	-12 52	8.2	8.2	Ao	7	..	19016b
24	2532	59.7	- 4 12	8.7	8.7	Ao	3	..	19226b	60	2610	59.9	-19 41	8.5	8.6	Fo	5	..	13144b
25	2685	59.7	-15 32	8.7	9.8	K2	2	..	18995b	61	6210	59.9	-27 12	9.1	10.1	G5	1	..	24494b
26	2681	59.7	-21 35	8.6	10.1	Ko	1	..	13144b	62	6867	59.9	-31 47	9.6	9.6	F5	2	..	40081b
27	6694	59.7	-26 20	8.2	8.9	Ao	4	..	24494b	63	5322	59.9	-35 57	9.9	10.1	Go	1	..	39925b
28	7085	59.7	-29 54	9.3	9.3	G5	2	..	24494b	64	5419	59.9	-37 48	8.0	8.9	G5	3	..	13055b
29	4918	59.7	-42 23	9.8	9.2	Ko	3	..	38418b	65	4075	59.9	-49 18	7.3	8.7	Ko	8	..	38415b
30	3445	59.7	-51 27	9.2	9.6	A5	3	..	40275b	66	4076	59.9	-49 51	9.4	9.6	F5	3	..	38415b
31	1837	59.7	-57 23	9.1	9.4	A	1	..	41151b	67	3785	59.9	-50 46	8.4	9.1	F8	5	..	38415b
32	997	59.7	-69 46	7.8	8.2	F5	3	..	24527b	68	3450	59.9	-51 57	9.6	9.4	A3	2	..	40275b
33	506	59.8	+69 37	7.74	9.09	Ma	4	..	37706i	69	1911	59.9	-55 13	8.61	8.9	Go	3	5,2	40275b
34	689	59.8	+65 42	9.4	10.2	G5	2	..	37517i	70	998	59.9	-69 23	8.3	8.8	F8	6	..	21452b
35	2041	59.8	+23 27	8.7	9.7	Ko	2	..	38173i	71	293	59.9	-81 49	8.9	9.0	A5	4	..	20869b
36	2153	59.8	+19 49	7.95	8.37	F5	4	..	37607i	72	81	59.9	-88 16	9.2	10.3	K2	2	..	22578b

## REMARKS.

53418. The observation, Ko, on I 36977, residual 10, was rejected. The spectrum is very faint and in poor focus on that plate.

53453. The lines appear to be broad.

53460. — Canis Majoris. Variable. Class III. Max. 9.5. Min. 10.2. Period unknown, perhaps irregular.

53516. The observation, K2, on B 24340, residual 12, was rejected. The spectrum is faint and the end of shorter wave length is not seen on that plate.

53641. Perhaps of Class B8.

53649. Perhaps of Class B3.

53704. C Puppis.

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53706. This star follows H. D. 53705,  $1^{\circ}.8$ , south  $0^{\circ}.8$ . The spectrum is well defined on photographs taken with short dispersion.
53709. — Mensae. Variable. Class III. Max.  $10.6$ . Min.  $12.5$ . Period, irregular.
53726. This star is C.P.D. —  $20^{\circ}$  1924, and is not contained in the Southern Bonn Durchmusterung.
53768. The class is somewhat uncertain.
53791. R Geminorum. Variable. Class II. Max.  $6.4$ . Min.  $13.8$ . Period,  $370^d$ . The spectrum is peculiar and resembles that of Class R rather than Class M. Two dark bands are present between  $H\beta$  and  $H\gamma$ . On photographs taken October 25, 1906 and October 12, 1910,  $H\gamma$  is bright. The spectrum is not seen in regions of shorter wave length than  $4300$ .
53792. TW Geminorum. Variable. Class III. Max.  $7.8$ . Min.  $8.2$ . Period, irregular. The variability does not appear to be certainly established.
53811. H Puppis.
- 53817.8. Bu. 3834. P. A.  $255^{\circ}.4$ , Dist.  $12^{\circ}.41$ , magn.  $8.5$  and  $9.2$ .
53847. V Canis Minoris. Variable. Class II. Max.  $8.8$ . Min.  $<15$ . Period,  $364^d$ . On a photograph taken November 12, 1895, the spectrum is very faint, but the class appears to be Ma. The line  $H\delta$  is very bright. There is only a trace of the bright line,  $H\gamma$ .
53883. Perhaps of Class B8.
53917. — Puppis. Variable. Class III. Max.  $8.0$ . Min.  $8.6$ . Period, irregular.
53975. The lines are narrow and K is strong for this class.
54096. The star —  $45^{\circ}$  2917, ptm. magn.  $11.5$ , precedes  $4^{\circ}.8$ , south  $0^{\circ}.6$ . In H.A. 54, 80, the magnitude of the combined light of these two stars is  $9.14$ .
54193. The star —  $7^{\circ}$  1750, ptm. magn.  $10.0$ , precedes  $4^{\circ}.1$ , south  $1^{\circ}.2$ . The spectrum is superposed and is of Class A.
54218. The star +  $3^{\circ}$  1561, ptm. magn.  $9.7$ , follows  $0^{\circ}.0$ , south  $0^{\circ}.8$ . The spectrum is superposed and is also of Class A.
54239.  $\theta$  Mensae.
54300. R Canis Minoris. Variable. Class II. Max.  $7.2$ . Min.  $10.0$ . Period,  $337^d.7$ . The spectrum is peculiar, and resembles that of R Andromedae, H. D. 1967. On photographs taken February 3, 1897, February 1, 1910, and January 24, 1911, the line  $H\gamma$  is bright.
54309. The line  $H\beta$  is bright.
54361. W Canis Majoris. Variable. Class III. Max.  $8.3$ . Min.  $10.0$ . Period, irregular.
54413. The star —  $28^{\circ}$  3875, ptm. magn.  $9.5$ , precedes  $4^{\circ}.2$  south  $0^{\circ}.9$ . The spectrum is superposed and appears to be also of Class A.
54417. Faint. Perhaps of Class A5.
54447. Faint. Perhaps intermediate between Classes K5 and Ma.
- 54542.3. Bu. 3860. P. A.  $43^{\circ}.9$ , Dist.  $15^{\circ}.61$ , magn.  $8.0$ ,  $9.2$ . On chart plates the two components are of nearly equal brightness. On spectrum plates, the spectrum of Class K of the south preceding component is barely seen on the stronger spectrum of Class A0.
54563. Parallax,  $0^{\circ}.106$ .
54605.  $\delta$  Canis Majoris. The lines are very narrow. See H. A. 28, 188.
54641. The line K is somewhat stronger than normal for Class B8.
54654. The observation, F2, on I 36977, residual 9, was rejected. The spectrum is faint on that plate.
54662. The lines are very narrow and sharply defined. The observation, B3, on B 8909, residual 8, was rejected. The fine lines are not visible on that plate.
54719.  $\tau$  Geminorum. Read  $0,10\ R$ , for  $0,2$ .
54795. AC Carinae. Variable. Class III. Max.  $8.2$ . Min.  $9.3$ . Period not known, perhaps irregular.
54831. A star about  $0.3$  magn. fainter than H. D. 54831 precedes  $2^{\circ}$ , north  $0^{\circ}.2$ . The spectrum is seen but it is not clearly defined. The Durchmusterung number and magnitude probably refer to both stars.
54893. A Puppis. The helium line  $4121.0$  appears slightly less intense than normal for this class.
- 55092.3. These two stars are of nearly equal brightness on chart plates. H. D. 55092 precedes  $4^{\circ}$ , north  $0^{\circ}.3$ .
55185.  $\delta$  Monocerotis. The lines are broad.
55228. Lines  $4077.9$ ,  $4128.1$ , and  $4131.1$  are very strong. In the intensities of these lines, the spectrum resembles that of  $\zeta$  Capricorni, described in H.A. 28, 97, Remark III.
55284. — Geminorum. Variable. Class II. Max.  $10.8$ . Min.  $<14.9$ . Period,  $377^d$ . The continuous spectrum is faint, but appears to be of some division of Class R. It bears some resemblance to the spectrum of R Andromedae, H. D. 1967.  $H\beta$  and  $H\gamma$  are nearly equally bright.
55307. A star about  $0.6$  magn. fainter than H. D. 55307, and in nearly the same right ascension, is north  $0^{\circ}.6$ . B.D. +  $6^{\circ}$  1566 probably refers to both objects.
55327. The star —  $56^{\circ}$  1262, magn.  $8.3$ , follows  $2^{\circ}.0$ , south  $0^{\circ}.5$ . The spectrum is superposed and is probably of Class G.
55424. The lines are somewhat narrow.
55549. The spectrum is probably composite. The line K is too faint for this class. A spectrum of Class A may be superposed.
55562. The line K is strong for this class.
55653. Perhaps variable with small range. Classified Ma on B 44401.
- 55672.3. The spectrum is of the composite type. Ordinary chart photographs show that these two stars are of nearly equal photographic brightness. On Mc 7090, taken with yellow light, however, the northern star is at least  $1.5$  magn. brighter than the southern. It thus proves that the spectrum of Class K must belong to the northern star.
- 55684.5. The spectrum is composite. The observation, B8, on B 44407 was rejected. This plate shows only a bare trace of the lines of the fainter star and they were thought to be helium lines in the spectrum of the brighter star. I 38609 shows the band G, line  $4226.9$ , and various other solar lines belonging to the spectrum of the fainter star.
55687. The classification is difficult owing to the superposition of the spectrum of H. D. 55688.

- 55710.1. H. D. 55711 follows  $1^{\circ}$ , south  $0'.6$ . The photographic magnitudes on chart plates are nearly the same.
55719. E Puppis.
55864.  $\gamma^1$  Volantis.
55865.  $\gamma^2$  Volantis.
55892. I Puppis.
- 55899,900. The spectrum is composite.
55901. Perhaps of Class B8. The star  $-10^{\circ} 1935$ , ptm. magn. 9.7, follows  $0'.3$ , north  $0'.2$ . The spectrum is superposed and causes the lines  $H\gamma$ ,  $H\delta$ , and  $H\epsilon$  of H. D. 55901 to appear double.
55988. The star  $-39^{\circ} 3167$ , ptm. magn. 10.6, precedes  $2'.5$ , south  $2'.8$ . The spectrum is partly superposed and appears to be also of Class G.
- 55997.8. H. D. 55997 precedes  $3'$ , north  $0'.3$ .
56014. The lines  $H\beta$  and  $H\gamma$  are bright and variable. See H.A. 28, 184, Remark 101. Read 3,10 R, for 3,R.
56022.  $L^1$  Puppis. The lines 4128.1, and 4131.1 are strong. Very few lines are present. See H.A. 28, 186, Remark 146. Read 1,10 R, for 1,R.
56096.  $L^2$  Puppis. Variable. Class II. Max. 3.4. Min. 6.2. Period,  $140^d.1$ . On photographs taken November 26, and 27, 1897, the spectrum is of Class Mb, having  $H\gamma$  and  $H\delta$  bright. The latter is 1.2 as bright as  $H\gamma$ . See H.A. 28, 189, Remark 215. On a photograph taken January 15, 1893, the spectrum is of Class Mb, and no bright lines are seen.
56101. The star  $+34^{\circ} 1568$ , ptm. magn. 8.8, follows  $1'.7$ , north  $5'.0$ .
56139.  $\omega$  Canis Majoris.  $H\beta$ ,  $H\gamma$  and  $H\delta$  are bright. See H.A. 28, 180, Remark 76. Read 2,10 R, for 2,R.
56167. RU Camelopardalis. Variable. Class IV. Max. 7.9. Min. 9.0. Period,  $22^d.1$ . The spectrum varies. At maximum it is of Class Ko, having a wide absorption band near the wave length 4227. At minimum, it is of Class Ro.
56211. The lines are narrow.
56324. The spectrum is faint and the class is uncertain.
56326. Perhaps of Class A5.
56455. The lines 4128.1 and 4131.1 are the strongest except those of hydrogen. The line K is faint, and very few lines are seen. See H.A. 28, 185, Remark 134.
56484. The solar lines appear to be strong, but the line K is less intense than H. Perhaps slightly peculiar. Classified A2 on I 37472.
56495. This spectrum is probably composite. The G band and other solar lines are seen more distinctly than in normal spectra of Class A3. A fainter spectrum of Class G is probably superposed.
56515. The line  $H\delta$  is strong for this class.
56537.  $\lambda$  Geminorum. Read 0,10 R, for 0,R.
56567. RR Monocerotis. Variable. Class II. Max. 9.3. Min. 13.5. Period,  $394^d.1$ . On a photograph taken December 1, 1908, the bright line  $H\delta$  is seen. Other portions of the spectrum are too faint to classify.
56670. The dark lines are very faint.
56731. Line 4077.9 is strong.
56855.  $\pi$  Puppis.  $H\beta$ ,  $H\gamma$ , and  $H\delta$  are strong for this class.
56986.  $\delta$  Geminorum. A typical star of Class Fo. See page 7.
57023. The star  $+31^{\circ} 1540$ , ptm. magn. 8.8, precedes  $0'.2$ , north  $0'.8$ .
57060.  $29$  Canis Majoris. Typical star of Class Oe. See page 6. See also H.A. 28, 148, for a more detailed description of this spectrum. Read 0,10 R, for 0,R.
57061.  $\tau$  Canis Majoris. Typical star for Class Oe5. See page 6. See also H.A. 28, 150, for a more detailed description of this spectrum. Read 0,10 R, for 0,R.
- 57066.7. Bu. 3974. P. A.  $253^{\circ}.7$ , Dist.  $14''.86$ , combined magnitude, 6.62.
- 57102.3. Bu. 3973. P. A.  $313^{\circ}.9$ , Dist.  $14''.63$ , combined magn. 5.22. The spectrum of H. D. 57102 may also belong to Class B8. It is seen only as a narrow edge on the preceding side of H. D. 57103.
57146. The spectrum is peculiar in combining characteristics of Classes Go and Ko. In the intensities of numerous lines, and in the distribution of light, it resembles Class Ko, while the hydrogen lines are as strong as in Go.
57150.  $v^1$  Puppis.  $H\beta$ ,  $H\gamma$  and  $H\delta$  are bright with dark edges and each one has a narrow, dark line centrally superposed. See H.A. 28, 180, Remark 77.
57163. The star  $-9^{\circ} 1085$ , ptm. magn. 10.4, precedes  $0'.0$ , north  $1'.0$ . The spectrum is superposed and is of Class A.
57167. R Canis Majoris. Variable. Class V. Max. 5.8. Min. 6.4. Period,  $1^d.1359514$ .
57219.  $v^2$  Puppis.
57233. Perhaps of Class B5.
57240. F Puppis.
57244. The spectrum is partly superposed on that of H. D. 57261.
57479. This spectrum is probably composite, as the end of shorter wave length resembles a star of Class A. Line K also appears to be fainter than normal for a spectrum of Class K.
57513. The star  $+23^{\circ} 1691$ , ptm. magn. 9.0, follows  $0'.6$ , north  $2'.4$ . The spectrum is superposed and is of Class A.
57536. Perhaps of Class F5.
57546. The star  $-30^{\circ} 4333$ , ptm. magn. 10.7, follows  $1'.2$ , north  $2'.3$ . The spectrum is superposed and is probably of Class A.
57608. Read 1,10-, for 1,R.
57623.  $\delta$  Volantis. The lines are somewhat narrow and the intensities of some lines resemble those in the spectrum of  $\delta$  Canis Majoris. See H.A. 28, 188, Remark 181.
57727. A Geminorum.
57729. The star  $+7^{\circ} 1706$ , ptm. magn. 8.4, follows  $2'.5$ , north  $0'.1$ . The spectrum is superposed and appears to be of Class Go or G5.
57770. V Geminorum. Variable. Class II. Max. 8.0. Min. 14.5. Period,  $276^d$ . On a photograph taken December 4, 1904, the spectrum is of Class Mb, having the line  $H\delta$  6 times as bright as  $H\gamma$ .
- 57832.3. The spectrum is composite. Innes  $7^h 31$ . P. A.  $157^{\circ}.0$ , Dist.  $2''.23$ , magn. 9.0 and 10.1.
- 57852.3. Innes  $7^h 32$ . P. A.  $20^{\circ}.3$ , Dist.  $9''.4$ , combined magn. 5.88.

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57884. The spectrum is very faint and may be slightly peculiar.
57888. A star in nearly the same right ascension, south  $0^{\circ}.6$ , is about 0.3 magn. fainter than H. D. 57888.
57895. Perhaps of Class B8.
58011. The line  $H\beta$  is bright.
58063. The observation, A2, on B 7406, residual 7, was rejected. The spectrum is very near the edge and out of focus on that plate.
58155. Read 2,10-, for 2,2.
58158. Perhaps of Class B8.
58195. — Canis Majoris. Variable. Max. 11.0. Min. 11.9. Variation probably irregular.
58207. — Geminorum.
58286. Read 0,10-, for 0,2.
58308. This star is C.P.D. —  $35^{\circ}$  1220, and is not contained in the Cordoba Durchmusterung. For ptm. magn. . . , read 9.9.
58309. Several solar lines appear to be strong for this class.
58337. This spectrum and that of H. D. 58364 appear to be alike and to be somewhat peculiar. The contrast is very strong between the bright and dark bands. The close proximity of these two spectra of a rare type is of interest.
58343.  $H\alpha$ ,  $H\beta$ , and  $H\gamma$  have been found to be bright in this spectrum by Adams, Lasby, and Merrill. On the Harvard photographs, no distinct bright lines are seen, but  $H\beta$  is nearly invisible.
58350.  $\eta$  Canis Majoris. The lines are narrow. See H.A. 28, 183, Remark 96.
58364. See H. D. 58337.
58367. — Canis Minoris. Read 0,10 R, for 0,2.
58394. The classification of the spectrum is difficult, owing to the superposition upon it of the spectra of H. D. 58395 and 58396. The former precedes  $2^{\circ}.1$ , south  $1^{\circ}.0$ . The latter follows  $3^{\circ}.0$ , south  $0^{\circ}.8$ .
58407. The star  $+5^{\circ}$  1653, ptm. magn. 9.7, precedes  $3^{\circ}.7$ , south  $0^{\circ}.3$ . The spectrum is superposed and is also of Class A.
58510. The star —  $20^{\circ}$  1916, ptm. magn. 8.5, precedes  $5^{\circ}.9$ , north  $0^{\circ}.5$ . The spectrum is partly superposed and is of Class B2 or B3.
58521.  $\gamma$  Lyncis. Variable. Class III. Max. 7.8. Min. 8.4. Period, irregular. Photometric magn. 7.36 in H.A. 54, 84.
- 58634.5. Innes  $7^{\circ}$  41. P.A.  $141^{\circ}.8$ , Dist.  $6^{\circ}.96$ , combined magn. 6.28.
58661. Several lines appear to be of increased intensity, especially a line near  $H\epsilon$ , probably 3982.9.
58676. The star —  $38^{\circ}$  3367, ptm. magn. 9.5, precedes  $3^{\circ}.1$ , north  $0^{\circ}.2$ . The spectrum is superposed and is probably also of Class K.
58713. RY Geminorum. Variable. Class V. Max. 9.0. Min. 10.5. Period,  $9^d.3005$ .
58715.  $\beta$  Canis Minoris. The line  $H\alpha$  was found by Merrill to be bright in photographs taken December 3, and 10, 1915. All other hydrogen lines are dark.
58756. Nova Monocerotis. The first spectrum obtained here was on February 21, 1918, 51 days after its appearance on a chart photograph. The spectrum had reached the nebular stage. See H. C. 209.
58791. The lines 4128.1 and 4131.1 are fairly well marked.
58880. Perhaps of Class K5.
58881. The spectrum is not seen in the region of shorter wave length than 4200. It resembles that of  $\pi^1$  Gruis. Bright and dark bands are situated between  $H\beta$  and  $H\gamma$ .
58923.  $\eta$  Canis Minoris.
58946.  $\rho$  Geminorum.
58972.  $\gamma$  Canis Minoris.
58978. The line  $H\beta$  is bright. On B 42935, this spectrum was classified B0, with the remark, " $H\beta$  not clearly seen. Lines hazy."
59026. Read 0,10-, for 0,2.
- 59067.8. The spectrum is composite. Bu. 4080. Stars A, B. P. A.  $171^{\circ}.4$ , Dist.  $0^{\circ}.90$ , magn. 6.2 and 8.2.
- 59076.7. The spectrum is composite.
59088. N. G. C. 2392. Planetary nebula. Ptm. magn. 8.72 in H.A. 54, 85.
- 59099,100. H. D. 59100 precedes  $1^{\circ}.8$ , south  $1^{\circ}.0$ .
59114. The dark lines are barely seen.
59123. This star is C.P.D. —  $35^{\circ}$  1238, and is not contained in the Cordoba Durchmusterung.
59148.  $b$  Geminorum.
59253. The star —  $27^{\circ}$  4107, ptm. magn. 10.2, follows  $1^{\circ}.5$ , north  $2^{\circ}.0$ . The spectrum is superposed and is also of Class A.
59256. The line K is strong for this class. Read 1,10 R, for 1,2.
59334. RX Monocerotis. Variable. Class II. Max. 9.5. Min.  $<12.5$ . Period, unknown. On a photograph taken October 28, 1897, the line  $H\delta$  is bright and superposed on a faint spectrum which is probably of Class Ma.
59485. Perhaps of Class A5.
- 59499,500. P. A.  $51^{\circ}.8$ , Dist.  $9^{\circ}.5$ , combined magn. 6.06.
- 59604.5. The spectrum is composite.
59612. The second observation was made on X 10138. The hydrogen lines are somewhat wide. The solar lines are narrow and resemble those in the spectrum of  $\alpha$  Cygni. Read 0,10 R, for 0,2.
59635.  $\gamma$  Puppis.
59693. U Monocerotis. Variable. Class III. Max. 6.7. Min. 7.5. Period, irregular.
59717.  $\sigma$  Puppis. Innes  $7^{\circ}$  48. P.A.  $73^{\circ}.2$ , Dist.  $22^{\circ}.4$ , magn. 3.1 and 7.9. The spectrum of the companion is seen on a photograph taken with the 24-inch Bruce Telescope and appears to be of Class G, although Innes calls the color blue. Read 5,10 R for 5,2.
59751. The star —  $8^{\circ}$  1953, ptm. magn. 10.1, follows  $1^{\circ}.1$ , north  $6^{\circ}.8$ . The spectrum is partly superposed and is also of Class A.
59881.  $\delta^1$  Canis Minoris.
59890. The spectrum appears to be slightly peculiar. In the distribution of light it resembles Class G5 or K0. It was classified K0 on B 8905, where the image is very dense.
- 59932.3. The spectrum is composite. H. D. 59932 precedes  $0^{\circ}.85$ , south  $15^{\circ}.7$ , and is about 0.3 magn. brighter on chart plates than the northern star. In the Catalogue of

- the Gesellschaft, the magnitudes are 8.9 and 8.7, for the southern and northern star, respectively. The spectrum of Class A appears almost certainly to belong to the preceding and southern star.
59949. Difficult. Perhaps of Class F5.
59950. S Canis Minoris. Variable. Class II. Max. 7.0. Min. 12.2. Period, 330<sup>d</sup>.3. On a photograph taken December 14, 1914, the spectrum is of Class Mc, and the line H $\delta$  is bright.
59998. Perhaps of Class A5.
60071. Perhaps of Class A5.
60092. The spectrum is composite. The line K is distinctly fainter than H, and traces of strong solar lines are seen. Two lines should be given to this star. The fainter spectrum may be of Class A3.
60098. The lines are very narrow.
60107. Read 2,10-, for 2,R.
60111.  $\delta^2$  Canis Minoris.
- 60116,7. The lines are very broad and both spectra are probably of Class A. H. D. 60116 precedes  $\alpha^2$ .8, and is in the same approximate declination.
60125. The star  $-29^\circ 45'18$ , ptm. magn. 9.5, precedes  $2^\circ$ .3, south  $1'.6$ . The spectrum is superposed and is of Class A.
- 60178,9.  $\alpha^1$  and  $\alpha^2$  Geminorum. Bu. 4122. P. A.  $224^\circ$ .3, Dist.  $5''.72$ , combined magn. 1.58. Both components are of Class A, as determined by the method described in H.A. 56, 247.
60196. Perhaps of Class Bo. The lines are faint.
60218. Z Puppis. Variable. Class II. Max. 7.5. Min. 13. Period, 516<sup>d</sup>.3. On a plate taken December 28, 1916, the spectrum is of Class Mb, having H $\delta$  4 times as bright as H $\gamma$ .
60266. X Puppis. Variable. Class IV. Max. 8.0. Min. 9.0. Period, 25<sup>d</sup>.948.
60307. Probably of Class Bo.
60308. The spectrum appears to belong to Class Oe5 or Bo.
60357.  $\delta^2$  Canis Minoris.
60385. The star  $+17^\circ 16'14$ , ptm. magn. 9.2, is in the same approximate right ascension, south  $3'.9$ . The spectrum is superposed and is of Class G.
60412. The star  $-8^\circ 19'78$ , ptm. magn. 9.5, follows  $\alpha^2$ .5, north  $\alpha^2$ .7. The spectrum is superposed and is probably also of Class A.
- 60414,5. The spectrum is composite and very peculiar. On B 2399, it was classified Kop, with the remark, "H and K faint. Composite?" The line K is not present as a wide band, but the violet end does not resemble a spectrum of Class A. The fainter component appears to be of some division of Class B.
60437. The spectrum is probably intermediate between Classes K5 and Ma.
60489. The lines 4128.1, and 4131.1 are somewhat strong.
60522.  $\nu$  Geminorum. Read 0,10 R, for 0,R.
60565. This star is also listed as  $-1^\circ 17'68$  in the Northern Bonn Durchmusterung.
- 60584,5.  $\eta$  Puppis. Bu. 4147. P. A.  $108^\circ$ .6, Dist.  $9''.37$ , combined magn. 5.18.
60606.  $z$  Puppis. H $\delta$  consists of a narrow bright line with a dark line on the edge of greater wave length.
60709. In H.A. 54, 86, the combined magnitude of this star and H. D. 60734 is 7.97.
60727. The star,  $-37^\circ 36'86$ , ptm. magn. 11.3, follows  $2^\circ$ .3, south  $3'.6$ . The spectrum is partly superposed and is probably of Class A.
60734. See H. D. 60709.
60816.  $\epsilon$  Mensae.
60826.  $-$  Canis Minoris. Variable. Class III. Max. 8.7. Min. 9.1. Period, irregular.
60863.  $p$  Puppis.
- 60960,1. H. D. 60960 precedes  $\alpha^2$ .2, north  $1'.8$ . The spectra are so much superposed that the classification is very difficult, and somewhat uncertain.
- 60966,7. The spectrum is composite.
- 60997,8. H. D. 60997 precedes  $\alpha^2$ .7, north  $\alpha^2$ .1. The star  $-14^\circ 20'22$ , ptm. magn. 9.1, follows  $\alpha^2$ .3, north  $1'.7$ . The spectrum is superposed and is of Class A.
61071. The lines appear to be narrow.
61095. The spectrum is very faint from H $\gamma$  to the violet end. Strong lines are present between H $\beta$  and H $\gamma$ , and are probably the lines 4435, 4455, and 4535.
61110.  $\alpha$  Geminorum.
61158. This star is C.D.M.  $-22^\circ 48'04$ , and is not contained in the Southern Bonn Durchmusterung.
61161. C.P.D.  $-24^\circ 26'16$ . The star C.P.D.  $-24^\circ 26'15$ , magn. 9.6, precedes  $\alpha^2$ .5, south  $1'.1$ . C. D.M.  $-24^\circ 56'69$ , ptm. magn. 11.8, may refer to the combined light of these two stars, assuming that the declination is about  $1'$  too far south.
61248. Q Carinae.
- 61328,9. C. D.M.  $-33^\circ 39'72 =$  C.P.D.  $-33^\circ 16'15$  and  $16'16$ . The former precedes  $2^\circ$ .5, south  $\alpha^2$ .2. The lines are broad and both spectra are probably alike.
61330.  $f$  Puppis.
61338.  $f$  Geminorum.
61421.  $\alpha$  Canis Minoris. Parallax,  $\alpha^2$ .324. Proper motion,  $1''.25$ ,  $215^\circ$ .0. Typical star of Class F5. See page 8.
61429.  $m$  Puppis. Read 0,10 R, for 0,R.
61537. C. D.M.  $-27^\circ 43'44 =$  C.P.D.  $-27^\circ 22'57$  and  $22'58$ . The former precedes  $\alpha^2$ .5, north  $\alpha^2$ .2. The magnitudes are 9.2 and 9.2 in the Cape Photographic Durchmusterung. The combined light reduced to the standard scale is given in Column 6.
- 61555,6. The preceding component =  $k$  Puppis. Bu. 4197. P. A.  $138^\circ$ .1, Dist.  $9''.72$ , combined magn. 3.81. On B 8901, the combined spectrum was estimated B8.
61592. This star is C. D.M.  $-22^\circ 48'77$ , and is not contained in the Southern Bonn Durchmusterung.
61600. The lines 4077.9, 4128.1 and 4131.1 are strong.
61618. This star is C. D.M.  $-22^\circ 48'81$ , and is not contained in the Southern Bonn Durchmusterung.
61639. This star is C.P.D.  $-35^\circ 14'33$ , and is also C. D.M.  $-35^\circ 37'51$ , assuming that the minutes of declination should read 12.0 instead of 2.0, as given in the Cordoba Durchmusterung.
61709. The line H $\beta$  is suspected to be bright.
- 61713,4. These spectra are partly superposed. H. D. 61713 precedes  $1^\circ$ .5, north  $\alpha^2$ .5.

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61715. The lines are narrow and appear to resemble in intensities those in the spectrum of  $\delta$  Canis Majoris.
61787. A star about 0.6 magn. fainter than H. D. 61787, follows  $1^{\circ}.41$ , north  $10^{\circ}.7$ .
61789. U Canis Minoris. Variable. Class II. Max. 8.5. Min. 13.6. Period, 410<sup>d</sup>.
61827. The star C.D.M.  $-32^{\circ} 4267$ , ptm. magn. 9.3, follows  $1^{\circ}.6$ , north  $2^{\circ}.7$ . The spectrum is partly superposed and appears to be of Class G.
61831.  $d^1$  Puppis.
61851. The lines appear to be narrow.
61873. This star is C.P.D.  $-23^{\circ} 2581$ . The identification as C. DM.  $-23^{\circ} 5900$  is probably also correct.
61878.  $d^1$  Puppis.
61899.  $d^1$  Puppis.
61935.  $\alpha$  Monocerotis.
61956. This star follows H. D. 61955 about  $4''$ , south  $0'.4$ . Both stars are of the same approximate brightness on chart plates. The Durchmusterung observation may refer to the combined light.
62044.  $\sigma$  Geminorum. A photograph of this spectrum was obtained by Schwarzschild at Potsdam, showing the line K to be bright.
62045. S Geminorum. Variable. Class II. Max. 8.2. Min. 14.5. Period, 293<sup>d</sup>.8. On a photograph taken February 20, 1893, the spectrum is of Class Ma, having the line H $\delta$  bright.
62056. C.P.D.  $-29^{\circ} 1967$ . The star C.P.D.  $-29^{\circ} 1968$ , ptm. magn. 9.4, precedes  $1^{\circ}.0$ , north  $0'.4$ . The spectrum is superposed and appears to be of Class Fo or F5.
62058. R Puppis. Probably not variable. The spectrum has narrow lines and is also peculiar in showing less absorption in the G band than normal. Strong lines are present, which probably resemble the lines in the spectrum of  $\delta$  Canis Majoris, H. D. 54605.
62099. N.G.C. 2438. Planetary nebula.
62125. The star,  $-3^{\circ} 2018$ , ptm. magn. 9.1, precedes  $0^{\circ}.8$ , south  $0'.4$ . The spectrum is superposed and confuses the spectrum of H. D. 62125.
- 62153.4. Innes  $7^h 65$ . P. A.  $105^{\circ}.6$ , Dist.  $2''.09$ , combined magn. 6.46.
62164. — Monocerotis. Variable. Other facts are undetermined. On an ordinary plate, the spectrum consists of dark bands and is seen only in the region between H $\delta$  and H $\gamma$ . On a plate stained with pinacyanol, the region of greater wave length resembles Class Mc. Perhaps the spectrum changes.
62166. N.G.C. 2440. Planetary nebula.
62172. This star is C. DM.  $-22^{\circ} 4965$ , and is not contained in the Southern Bonn Durchmusterung.
62222. This star is C.P.D.  $-21^{\circ} 2609$ , and is not contained in the Southern Bonn Durchmusterung.
62223. This star is C.P.D.  $-21^{\circ} 2606$ , and is not contained in the Southern Bonn Durchmusterung.
62226. Classified B8 in H. A. 28, 200, but photographs taken with the 8-inch Bache Telescope show line 3819.8 and other helium lines to be too strong for that class.
62285. c Geminorum.
62340. The spectrum is very faint. It probably belongs to Class R, and may be of Class R3.
62345.  $\kappa$  Geminorum. Read  $0,10$  R, for  $0,2$ . A typical star of Class G5. See page 8.
62470. This star is C. DM.  $-22^{\circ} 5016$ , and is not contained in the Southern Bonn Durchmusterung.
62509.  $\beta$  Geminorum.
62623. l Puppis. The lines are narrow and the spectrum resembles that of  $\alpha$  Cygni. See H.A. 28, 186, Remark 155. Read  $3,10$  R, for  $3,2$ .
62647. The intensities of several dark lines resemble those in the spectrum of 61 Cygni.
62721. g Geminorum.
62753. The line H $\beta$  is not distinctly seen and is suspected to be bright.
62774. This star is C.D.M.  $-22^{\circ} 5062$ , and is not contained in the Bonn Durchmusterung.
- 62863.4. Bu. 4250. P.A.  $338^{\circ}.6$ , Dist.  $16''.94$ , combined magn. 5.62. The lines are very wide and almost double. Both spectra are probably of Class A0.
62866. Probably of Class B0.
62890. The star C.D.M.  $-28^{\circ} 4805$ , ptm. magn. 11.2, precedes  $4^{\circ}.9$ , south  $1^{\circ}.0$ . The spectrum is partly superposed and is of Class A.
62898.  $\pi$  Geminorum.
- 63023.4. The spectrum is composite.
63032. c Puppis.
63077. Proper motion,  $1''.68$ ,  $351^{\circ}.1$ .
63081. Perhaps of Class K5.
63130. The spectrum is very faint. It appears to be of Class R0 or R3.
63191. The declination of this star in the Southern Bonn Durchmusterung is  $4'$  too far south.
63195. — Puppis. Variable. Class II. Max. 11.5. Min. <15. Period, unknown. On a photograph taken April 21, 1914, the spectrum is faint and probably of Class Ma, having H $\delta$  3 times as bright as H $\gamma$ .
63197. The star C.D.M.  $-29^{\circ} 4930$ , ptm. magn. 10.7, follows  $1^{\circ}.4$ , north  $1^{\circ}.5$ . The spectrum is superposed and appears to be also of Class A.
- 63208.9. The spectrum is composite.
63215. In H. A. 28, 201, classified B3, but the spectrum is seen to better advantage on photographs taken with the 8-inch Telescope.
63218. W Puppis. Variable. Class II. Max. 8.7. Min. 12.6. Period, 120<sup>d</sup>.8. On a photograph taken November 24, 1894, the spectrum is of Class Ma, having H $\gamma$  and H $\delta$  bright and nearly equal in intensity.
63295.  $\zeta$  Volantis. Read  $5,10$  R, for  $5,2$ .
63320. The lines are narrow.
63334. T Geminorum. Variable. Class II. Max. 8.0. Min. 13.5. Period, 288<sup>d</sup>.1. On a photograph taken February 8, 1893, the spectrum is peculiar and probably resembles that of R Andromedae, H. D. 1967. It is very faint, except in the region between H $\beta$  and H $\gamma$ . The lines H $\gamma$  and H $\delta$  are bright.
63353. W Canis Minoris. Variable. Class III. Max. 9.8. Min. 11.3. Period, irregular. The spectrum is faint, and may belong to Class R8.



63357. Line 4026.3 appears strong for this class.
63425. The star C. DM.  $-41^{\circ} 33' 85''$ , ptm. magn. 7.5, follows  $\alpha^{\circ}.3$ , south  $1^{\circ}.1$ . No trace of the spectrum is seen. In the Cape Photographic Durchmusterung, this star has the magnitude 8.8. On chart plates, it is more than a magnitude fainter than H. D. 63425.
63443. This star is C. DM.  $-22^{\circ} 51' 57''$ , and is not contained in the Southern Bonn Durchmusterung.
63451. S Puppis. Considered by Gould to be variable within the limits 7.2 and 9.0. Variability not confirmed by recent observers.
63462.  $\sigma$  Puppis. H $\beta$  and H $\gamma$  are bright and superposed on very wide dark bands. All the absorption lines are wide and are only a little darker than the adjacent portions of the spectrum.
- 63523.4. The spectra are superposed. The lines in the spectrum of H. D. 63524 appear to be narrower than in that of H. D. 63523.
63596. This star is C. DM.  $-22^{\circ} 51' 82''$ , and is not contained in the Southern Bonn Durchmusterung.
63637. The line H $\delta$  is rather strong for this class. The star C. DM.  $-29^{\circ} 49' 71''$ , ptm. magn. 11.4, precedes  $8^{\circ}.3$ , south  $\alpha^{\circ}.5$ . The spectrum appears to be of Class A. The ptm. magn. of the combined light of these two stars, given in H.A. 54, 89, is 7.61.
63642. T Puppis. Considered at Cordoba to be variable within the limits 6.5 to 7.2. Recent observers find no variation.
63700.  $\xi$  Puppis. The spectrum presents a peculiar combination of strong hydrogen lines, and many of the general characteristics of Class Ko. See H.A. 28, 97, Remark 100.
63733. In the region of 4700, the spectrum resembles that of  $\pi^1$  Gruis, R. A.  $22^h 16^m .6$ , Dec.  $-46^{\circ} 27'$ . It is very faint from H $\gamma$  to the end of shorter wave length.
63744. Q Puppis.
63775. The star  $+5^{\circ} 18' 08''$ , ptm. magn. 9.2, follows  $\alpha^{\circ}.0$ , north  $1^{\circ}.0$ . The spectrum is superposed and is of Class A.
63777. The star  $+2^{\circ} 18' 02''$ , ptm. magn. 9.7, precedes  $1^{\circ}.8$ , south  $5^{\circ}.3$ . The spectrum is partly superposed and is probably of Class K.
63804. The spectrum is nearly continuous. It may be of Class Oe5. On B 42915, it was suspected to be composite, but this has not been confirmed.
63824. C. DM.  $-27^{\circ} 45' 06'' =$  C.P.D.  $-27^{\circ} 24' 64''$  and  $24' 65''$ . The latter follows  $1^{\circ}.0$ , and is in the same approximate declination. The combined photographic magnitude of the two stars is given in the table.
63922. P Puppis. Read 5,10 R, for 5,R.
- 63926.7. The spectrum is composite.
63975.  $\zeta$  Canis Minoris.
63996. Line 4077.9 is slightly stronger than normal.
64029. The spectrum is hazy. This star is C.P.D.  $-39^{\circ} 17' 47''$ . The star C.P.D.  $-39^{\circ} 17' 48''$ , ptg. magn. 10.5, follows  $\alpha^{\circ}.5$ , south  $\alpha^{\circ}.3$ .
64059. The spectrum is probably composite. Lines are seen which do not belong to Class A2.
64090. Proper motion,  $1^{\circ}.97$ ,  $158^{\circ}.3$ .
64109. The lines may be narrow.
64145.  $\phi$  Geminorum. Read 0,10 R, for 0,R.
64203. Probably of Class Ao.
64332. The spectrum shows some resemblance to that of  $\pi^1$  Gruis, R. A.  $22^h 16^m .6$  Dec.  $-46^{\circ} 27'$ , in the region between H $\beta$  and H $\gamma$ . It appears to combine characteristics of Classes M and R. Classified Ma on I 38629, on which it is very faint.
64440.  $\alpha$  Puppis. Read 0,10 R, for 0,R.
64450. A star in nearly the same right ascension, is north  $1^{\circ}.2$ . The spectrum is superposed and is also of Class A. The observed intensity refers to the combined light of these two stars.
64503.  $\beta$  Puppis.
64511. U Geminorum. Variable. Class II. Max. 8.9. Min. 14.0. Period, irregular. On the best photographs, the spectrum shows no lines.
64568. The star C. DM.  $-25^{\circ} 52' 29''$ , ptm. magn. 11.8, follows  $3^{\circ}.6$ , north  $\alpha^{\circ}.5$ . The spectrum is of Class A.
64639. The line H $\beta$  is not seen distinctly, and is suspected to be bright.
- 64689.90. H. D. 64690 follows  $1^{\circ}$ , south  $\alpha^{\circ}.6$ , and is about 0.2 magn. brighter photographically than H. D. 64689.
64760. J Puppis. The lines appear to be double on some photographs.
- 64796.7. These two stars are of nearly equal brightness on chart photographs. H. D. 64797 follows  $1^{\circ}$ , north  $\alpha^{\circ}.3$ .
64802. Read 0,10-, for 0,R.
64856. This star is C. DM.  $-22^{\circ} 53' 54''$ , and is not contained in the Southern Bonn Durchmusterung.
64964. The observation, F8, on I 37560, residual 14, was rejected.
65037. H. D. 65013 precedes  $2^{\circ}.9$ , north  $1^{\circ}.4$ . The spectra of these two stars are partly superposed, and the classification is difficult. Classified B5 on X 12336, but this is uncertain owing to the superposition.
65176. The spectrum is nearly continuous.
65181. In H.A. 54, 91, the photometric magnitude of the combined light of this star and H. D. 65204 is 7.85.
65204. See H. D. 65181.
65228. j Puppis. Read 2,10 R, for 2,R.
65257. The bands H and K appear to be narrower than in typical stars of Class Ko. The spectrum resembles that of 61 Cygni in the intensity of several lines.
65310. This star is C. DM.  $-22^{\circ} 54' 16''$ , and is not contained in the Southern Bonn Durchmusterung.
65339. Lines 4077.9, 4128.1, and 4131.1 are strong. The metallic lines appear to be narrow and may resemble in intensity those in the spectrum of  $\alpha$  Cygni. The hydrogen lines, however, appear wider than in the spectrum of  $\alpha$  Cygni.
65460. Read 2,10-, for 2,R.
- 65461.2. The spectrum is composite.
65498. Perhaps of Class F5.
65551. N Puppis.
65566. S. D.  $-21^{\circ} 21' 97'' =$  C.P.D.  $-21^{\circ} 29' 89''$ , ptg. magn. 10.5 and  $-21^{\circ} 29' 90''$ , ptg. magn. 9.5. The combined photographic magnitude is given in the Table.
65575.  $\chi$  Carinae. Read 2,10 R, for 2,R.

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65583. Proper motion,  $1''.19$ ,  $186^\circ.8$ .  
 65643. The spectrum is suspected to be composite.  
 65683. The line 4077.9 is well marked.  
 65685. O Puppis.  
 65714.  $\omega$  Cancri.  
 65818. V Puppis. Variable. Class V. Max. 4.1. Min. 4.8. Period,  $1^d.454476$ . The star is also a spectroscopic binary, the period agreeing with that of the variation in light. The fainter component has a spectrum nearly, if not quite, similar to that of the brighter. See H.A. 28, 177, Remark 41.  
 65875. The lines H $\beta$  and H $\gamma$  are bright.  
 65940. U Puppis. Variable. Class II. Max. 8.5. Min. 14.5. Period,  $315^d$ . On a photograph taken March 3, 1894, the spectrum is of Class Mb, having the line H $\delta$  4 times as bright as H $\gamma$ .  
 66005.6. H. D. 66056 follows  $1^\circ.1$ , north  $0'.2$ , combined ptm. magn. 5.78.  
 66068.9. The spectrum is composite.  
 66094.5. The spectrum is composite.  
 66133.4. H. D. 66133 precedes  $0^\circ.9$ , south  $2'.0$ . The spectra are superposed so that the faint lines are not seen. The lines in the spectrum of H. D. 66133 appear to be narrow, while those in H. D. 66134 are wide.  
 66141. Read  $0.10$ , for  $0.2$ .  
 66216.  $\chi$  Geminorum.  
 66245. Photographed on a plate taken with the 24-inch Reflecting Telescope, and stained with pinacyanol.  
 66255. The lines 4128.1 and 4131.1 are strong.  
 66311. The spectrum is slightly peculiar. Line K is very faint, and 3856.2 and 3863.2, seen as one hazy band, are the strongest lines except those of hydrogen.  
 66317. Perhaps of Class A5.  
 66591. D Carinae.  
 66595. The spectrum may be slightly peculiar. An appearance of a bright line near the position 4650 is seen.  
 66605. The lines 4128.1 and 4131.1 are strong.  
 66713. The lines are somewhat narrow.  
 66788. The line H $\beta$  is suspected to be bright.  
 66794.5. The spectrum is composite. The lines are narrow.  
 66811.  $\zeta$  Puppis. A typical star of Class Od. See page 6, and also H.A. 28, 148 for a description of the spectrum.  
 66824. The line 4026.3 is stronger than normal for this class. Read  $2.10$  R, for  $2.2$ .  
 66918. This spectrum was classified K5 on B 15516, on which the region between H $\beta$  and H $\gamma$  is superposed on the spectrum of H. D. 66943.  
 66964. This star is C. P. D.  $-27^\circ 2780$ . C. P. D.  $-27^\circ 2779$ , magn. 9.2, precedes  $0^\circ.5$ , south  $0'.7$ . The spectrum is superposed and is also of Class A.  
 66985. The star  $-10^\circ 2373$ , ptm. magn. 10.2, precedes  $2^\circ.4$ , north  $5'.3$ . The spectrum is partly superposed and is probably of Class A.  
 67135. The star  $+9^\circ 1873$ , ptm. magn. 8.8, follows  $0^\circ.2$ , north  $5'.1$ . The spectrum is partly superposed and is of Class A.  
 67159. H. D. 67158 precedes  $1^\circ.3$ , north  $0'.5$ . The superposition of this spectrum makes the fine lines of H. D. 67159 indistinct.  
 67190. RT Puppis. Variable. Class III. Max. 9.3. Min. 10.2. Period, irregular.  
 67228.  $\mu$  Cancri.  
 67269.70. The star C.D.M.  $-45^\circ 3740$ , ptm. magn. 9.8, precedes  $5^\circ.1$ , north  $1'.7$ . In H.A. 34, 133, the ptm. magn., 7.80, refers to the combined light of these three stars.  
 67445. The class is uncertain, owing to the faintness of the spectrum.  
 67507. RU Puppis. Variable. Class III. Max. 9.4. Min. 11.6. Period, irregular.  
 67523.  $\rho$  Puppis. A typical star of Class F5. See page 8. See H.A. 28, 96, Remark 82.  
 67594.  $\zeta$  Monocerotis. Read  $0.10$  R, for  $0.2$ .  
 67625. The line 4077.9 appears stronger than normal.  
 67650. RT Monocerotis. Variable. Max. 8.5. Min. 9.3. Class and period unknown.  
 67710. The spectrum is indistinct and may be of Class A5. The star  $+26^\circ 1729$ , ptm. magn. 9.8, precedes  $0^\circ.1$ , south  $1'.8$ . The spectrum is superposed and appears to be of Class G.  
 67767.  $\psi$  Cancri.  
 67797. The lines are wide. Read  $0.10$  R, for  $0.2$ .  
 67892. The star C.D.M.  $-50^\circ 3171$ , ptm. magn. 11.5, follows  $2^\circ.1$ , north  $0'.1$ . The magnitude 9.53, in H.A. 54, 93, refers to the combined light of these two stars.  
 67934. The lines are somewhat broad. Read  $0.10$  R, for  $0.2$ .  
 68022.3. The spectrum is composite.  
 68025. The lines appear to be somewhat narrow.  
 68090. This star is C. P. D.  $-45^\circ 2171$ .  
 68119. The line K appears fainter than normal for this class.  
 68143. The star  $+1^\circ 2017$ , ptm. magn. 7.8, precedes  $1^\circ.0$ , north  $0'.8$ . The spectrum is superposed and is probably of Class K. On chart plates, this star is about 0.8 magn. fainter than H. D. 68143.  
 68255.6.7.  $\zeta$  Cancri. Bu. 4471. For A and B, P.A.  $57^\circ.6$ , Dist.  $1''.14$ . For AB and C, P.A.  $154^\circ.7$ , Dist.  $5''.30$ . Combined magn. 4.71. Read  $0.10$  R, for  $0.2$ .  
 68273.  $\gamma$  Velorum. The brightest star of Class O. A description of the spectrum, with a table of the wave lengths and intensities of the lines, is given in H.A. 28, 243.  
 68341. This star is C. P. D.  $-35^\circ 1982$ , and is not contained in the Cordoba Durchmusterung.  
 68351.  $\psi$  Geminorum.  
 68411. C. P. D.  $-22^\circ 3203$ . The star, C. P. D.  $-22^\circ 3204$ , magn. 9.4, follows  $0^\circ.5$ , south  $0'.4$ .  
 68450. The lines appear to be narrow.  
 68456. B Carinae. Read  $0.10$  R, for  $0.2$ .  
 68468. The line K is strong for this class.  
 68474. The lines appear to be narrow.  
 68520.  $\epsilon$  Volantis.  
 68553.  $h^1$  Puppis. The hydrogen lines are strong for this class.  
 68693. The star C.D.M.  $-37^\circ 4369$ , ptm. magn. 10.8, follows  $0^\circ.4$ , north  $0'.6$ . The spectrum is superposed and appears to be also of Class A.  
 68775. RX Cancri. Variable. Class III. Max. 8.8. Min. 9.9. Period, probably irregular.

68808. The lines are narrow and sharply defined. The intensities resemble those in the spectrum of  $\delta$  Canis Majoris, H. D. 54605.
68857. The lines of Fraunhofer's band G appear stronger than normal for this class.
68860. RS Puppis. Variable. Class IV. Max. 6.8. Min. 7.9. Period,  $41^d.313$ . The spectrum appears to change from Ko at maximum to K5 or Ma at minimum. Some very strong lines are present, especially in the region near 4440.
68877. The observation, F2, on I 38271, residual 9, was rejected. The spectrum is indistinct and partly superposed on that of H. D. 68904.
68904. The observation, F5, on I 38271, residual 12, was rejected. The spectrum is indistinct and partly superposed on that of H. D. 68877.
68943. This star is C. P. D.  $-35^\circ 2049$ , and is not contained in the Cordoba Durchmusterung.
68980.  $\gamma$  Puppis. The lines H $\beta$ , H $\gamma$ , and H $\delta$  are bright and superposed on dark bands. The helium lines appear to be faint.
68985. Perhaps of Class B8.
69002. Absorption near 4227 is strong.
69082. H. D. 69081 precedes  $0^\circ.0$ , north  $1'.3$ . The two spectra are superposed. The class is somewhat uncertain.
69085. This star is C. P. D.  $-43^\circ 2328$ , and is not contained in the Cordoba Durchmusterung.
69142.  $h^2$  Puppis.
- 69164.5. C. D.M.  $-40^\circ 4003 =$  C. P. D.  $-40^\circ 2262$  and 2263. The former star precedes  $1^\circ.0$ , south  $0'.3$ .
69190. RX Puppis. Variable. Class III. Max. 11.5. Min. 14.1. Period probably irregular. The spectrum is very peculiar. It shows the hydrogen lines and the nebular lines 3869, 4363, 4688 to be bright, and resembles the spectrum of certain new stars at the time they are changing into gaseous nebulae. The light curve between 1890 and 1912 and other facts concerning this star are given in H. C. 182.
69243. R Cancr. Variable. Class II. Max. 6.0. Min. 11.3. Period,  $362^d$ . On a photograph taken November 3, 1897, the spectrum is of Class Mb, having the lines H $\gamma$ , H $\delta$ , H $\epsilon$ , and H $\eta$  bright. H $\delta$  is 7 times as bright as H $\gamma$ .
69267.  $\beta$  Cancr. A typical star of Class K2. See page 8.
69342. The line K is strong for this class.
69404. H $\beta$  is a narrow bright line. H $\gamma$ , H $\delta$  and H $\epsilon$  are dark and broad. The helium lines are narrow.
69425. The spectrum appears to be nearly continuous. It is probably of Class Bo.
69464. Probably of Class Bo.
- 69479,80. The spectrum is composite.
69648. The lines are indistinct.
69830. Parallax,  $0''.108$ . Proper motion,  $1''.03$ ,  $166^\circ.5$ .
69863. C Carinae. The lines are wide. This may be due to duplicity. Innes  $8^h 33$ , P. A.  $61^\circ.6$ , Dist.  $3''.67$ , magn. 5.4 and 8.6.
69897.  $\chi$  Cancr.
70011.  $\lambda$  Cancr.
70032. Perhaps this spectrum is slightly peculiar. In the region between H $\beta$  and H $\gamma$ , it resembles Class G5 while H $\delta$  is as strong as in Class F8.
70060.  $\eta$  Puppis.
70072. RY Hydrae. Variable. Class III. Max. 8.3. Min. 9.6. Period, irregular.
70276. V Cancr. Variable. Class II. Max. 7.5. Min. 13.0. Period,  $272^d.1$ . On a photograph taken March 30, 1892, the lines H $\beta$  and H $\gamma$  are nearly equally bright, and the spectrum is very faint from H $\gamma$  to the end of shorter wave length. The spectrum may resemble that of R Andromedae, H. D. 1967.
70318. The spectrum is suspected to be composite. Traces of faint lines are seen, which appear to belong to a spectrum of Class G.
70325. The lines 4128.1 and 4131.1 are well marked.
70326. C. D.M.  $-34^\circ 4637 =$  C. P. D.  $-34^\circ 2263$  and 2264. The latter star follows  $0^\circ.7$ , north  $0'.2$ .
70376. The lines appear to be somewhat narrow.
70421. Z Cancr. Variable. Class III. Max. 8.5. Min. 9.2. Period perhaps  $70^d$  or irregular.
- 70442.3. The spectrum is composite.
70542. C. D.M.  $-50^\circ 3274 =$  C. P. D.  $-50^\circ 1556$  and 1557. The latter star follows  $0^\circ.0$ , south  $0'.2$ . The photographic magnitudes on the International Scale are 10.4 and 10.8, respectively. The combined magnitude is given in Table I.
70555.  $w$  Puppis. Read  $0,10 R$ , for  $0,R$ .
70569.  $d^1$  Cancr.
70583. H $\beta$  is suspected to be bright.
70585. This star precedes H. D. 70586,  $2^\circ.8$ , north  $0'.1$ . Only an edge of the spectrum is seen.
70601. This star is C. P. D.  $-37^\circ 2243$ , and is not contained in the Cordoba Durchmusterung.
- 70617,8. H. D. 70617 precedes  $2^\circ.0$ , and is in the same declination as H. D. 70618.
70761. The lines are somewhat narrow, and their intensities appear to resemble those in the spectrum of  $\delta$  Canis Majoris, H. D. 54605.
- 70822,3. H. D. 70822 precedes  $3^\circ$ , north  $0'.3$ . The class of each spectrum is uncertain.
70825. The lines are somewhat narrow.
70837. C. D.M.  $-31^\circ 5979 =$  C. P. D.  $-31^\circ 2329$  and 2330. The former star precedes  $1^\circ.3$ , south  $0'.1$ . The magnitude of each star corrected to the International Scale is 8.9. The combined photographic magnitude is given in the Table.
70877. The star  $+62^\circ 1000$ , pm. magn. 8.9, follows  $7^\circ.0$ , north  $7'.1$ . The spectrum is partly superposed and appears to be also of Class G.
70930. B Velorum. The lines are wide. Innes  $8^h 41$ . P. A.  $142^\circ$ , Dist.  $1''$ , magn. 5.1, and 7.1.
70938. Variability suspected between the limits 8.2 and 8.8.
71030.  $d^2$  Cancr.
71046.  $\kappa^1$  Volantis. Read  $0,10 R$ , for  $0,R$ . Line 4471.6 is somewhat fainter than in the spectrum of the typical star.
71066.  $\kappa^2$  Volantis. Read  $1,10 R$ , for  $1,R$ . Lines 4128.1 and 4131.1 are strong.
71093.  $\phi^1$  Cancr.

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- 71129,30.  $\epsilon$  Carinae. The spectrum is composite. See H.A. 28, 189, Remark 202, for a detailed description of the peculiarities of this spectrum.
- 71150,1.  $\phi^2$  Cancr. Bu. 4601. P. A., 216°.0, Dist. 5".02, combined magn. 5.56. The class of spectrum and intensity should apply to the combined light. No peculiarity is seen in the combined spectrum, however, and both may be alike.
- 71152,3. The spectrum is composite. Bu. 4602. P. A., 44°.0, Dist. 5".86, combined magn. 6.58.
71155. C Hydrae. Line 4026.3 is seen.
71243.  $\alpha$  Chamaeleontis.
71290. The star, C. P. D.  $-52^\circ 1459$ , magn. 9.6, precedes  $0^\circ.0$ , north  $1^\circ.1$ . The spectrum is superposed but cannot be classified.
71369.  $\sigma$  Ursae Majoris.
- 71418,9. C. DM.  $-22^\circ 2271 =$  C. P. D.  $-22^\circ 3509$  and 3510. The latter star follows  $1^\circ.0$ , north  $0^\circ.4$ . The spectrum is composite. The stars are of nearly equal brightness on ordinary plates, but on a plate taken with yellow light, the following star is nearly two magnitudes brighter than the preceding.
71459. Read 0,10-, for 0,R.
- 71466,7. The spectrum is composite.
- 71487,8. Innes 8<sup>a</sup> 42. P. A. 122°.4, Dist. 7".87, combined magn. 6.19. Line 4026.3 is present.
71511. The spectrum may be slightly peculiar in combining characteristics of Classes G and K. The observation, Ko, on B 41151, residual 12, was rejected. The spectrum is near the edge and in poor focus on that plate.
71576.  $\eta$  Volantis.
71672. This star is C. P. D.  $-47^\circ 2238$ . The identification in the Cordoba Durchmusterung is doubtful.
71701.  $\theta$  Chamaeleontis.
71793. R Chamaeleontis. Variable. Class II. Max. 8.9. Min. 12.8. Period, 335<sup>d</sup>. On a photograph taken November 12, 1898, the spectrum is of Class Mb, having the line H $\delta$  4 times as bright as H $\gamma$ . This star is Z. C. 8<sup>a</sup> 2054.
- 71820,1. H. D. 71820 precedes  $2^\circ.4$ , north  $1^\circ.5$ . The combined spectrum appears to be nearly continuous and it is probable that both stars have spectra of Class B.
71866. The lines 4128.1 and 4131.1 are strong.
71878.  $\beta$  Volantis.
71879. This star precedes C. P. D.  $-67^\circ 934$ , 16<sup>a</sup>.5. The numbers should be transposed in the Cape Photographic Durchmusterung.
71887. RT Hydrae. Variable. Class III. Max. 7.7. Min. 9.5. Period, irregular.
71935. F Velorum.
71946. The star C. DM.  $-27^\circ 5536$ , ptm. magn. 9.3, follows  $1^\circ.3$ , south  $1^\circ.0$ . The spectrum is superposed and is of some division of Class B.
71966. The star C. DM.  $-39^\circ 4385$ , ptm. magn. 9.9, follows  $4^\circ.9$ , south  $1^\circ.0$ . The photometric magnitude 8.85 probably refers to the combined light of the two stars.
72037. A Ursae Majoris. Read 0,10 R, for 0,R.
72041.  $\nu^1$  Cancr.
72094.  $\theta$  Cancr.
72108. A Velorum.
72127. Innes 8<sup>a</sup> 44. P. A. 348°.6, Dist. 4".71, magnitudes 6.66 and 5.22. The lines are narrow.
- 72177,8. H. D. 72177 precedes  $0^\circ.5$ , north  $0^\circ.2$ . The lines of the two spectra are barely separated.
72229. Perhaps of Class B8. The star  $-43^\circ 4348$ , ptm. magn. 11.5, follows  $5^\circ.3$ , south  $0^\circ.6$ . The lines H $\gamma$  and H $\delta$  of this spectrum are superposed on the spectrum of H. D. 72229.
72275. V Carinae. Variable. Class IV. Max. 7.4. Min. 8.1. Period, 6<sup>d</sup>.6951.
72278. The spectrum is probably composite. It resembles Class F5 from H $\delta$  to H $\gamma$  and Class A3 from H $\gamma$  to the violet end.
72292.  $\eta$  Cancr.
72324.  $\nu^2$  Cancr.
72418. Perhaps of Class A5.
72633. On the second plate, faint, recorded "K5, perhaps Ma."
72673. Proper motion,  $1^\circ.32$ ,  $301^\circ.4$ .
72698. X Carinae. Variable. Class V. Max. 7.9. Min. 8.7. Period, 0<sup>d</sup>.541318.
- 72737,8. The spectrum is composite. Innes 8<sup>a</sup> 49. P. A. 297°.2, Dist. 0".59, magn. 6.7 and 8.0.
72754. The line H $\delta$  is bright. The helium lines are faint.
72787. The helium lines are very narrow. The hydrogen lines appear moderately broad.
72863. U Cancr. Variable. Class II. Max. 8.4. Min. <14. Period, 305<sup>d</sup>.0. On a photograph taken May 9, 1898, a very faint spectrum is seen, having the line H $\gamma$  bright.
72905.  $\pi^1$  Ursae Majoris.
- 72945,6. Bu. 4677. P. A. 24°.8, Dist. 10".26, combined magn. 5.71. Chart photographs show that the north following component is at least two magnitudes fainter photographically than the south preceding. Its spectrum is probably of a later type.
72968. The lines 4077.9, 4128.1, and 4131.1 are strong.
73108.  $\pi^2$  Ursae Majoris.
73143. c Cancr.
73155. C Velorum.
73262.  $\delta$  Hydrae. The lines are wide.
- 73323,4. H. D. 73323 precedes  $1^\circ$ , south  $0^\circ.2$ . The two stars are nearly equal in brightness on chart plates.
73338. The lines appear to be broad.
73340. Lines 4128.1 and 4131.1 are probably stronger than normal.
73343. R Z Cancr. Variable. Max. 9.5. Min. 11.2. Class, unknown.
73389.  $\epsilon^2$  Carinae.
73390.  $\epsilon^1$  Carinae.
73471.  $\sigma$  Hydrae. Read 0,10 R, for 0,R.
73495.  $\eta$  Pyxidis.
73502. RZ Velorum. Variable. Class IV. Max. 7.5. Min. 8.6. Period, unknown.
73507. X Ursae Majoris. Variable. Class II. Max. 8.4. Min. <13.0. Period, 251<sup>d</sup>. On a photograph taken March 19, 1917, the spectrum is of Class Mc, having the line H $\delta$  0.8 as bright as H $\gamma$ .

73617. The hydrogen lines appear to be narrow.
73634.  $\epsilon$  Velorum.
73644. The class is very uncertain. The spectrum is nearly continuous.
73678. T Velorum. Variable. Class IV. Max. 7.6. Min. 8.5. Period, 4<sup>d</sup>.6392.
73696. The star C. DM.  $-39^{\circ} 4601$ , ptm. magn. 11.7, precedes  $2^{\circ}.0$ , south  $0^{\circ}.7$ . The spectrum is superposed and makes that of H. D. 73696 very indistinct.
73731.  $\epsilon$  Cancr.
73766. RV Hydrae. Variable. Class III. Max. 7.9. Min. 9.0. Period, irregular.
73803. This star is C. P. D.  $-18^{\circ} 230$ , magn. 9.3, and is not contained in the Cordoba Durchmusterung.
73809. The star C. DM.  $-40^{\circ} 4775$ , ptm. magn. 11.3, follows 4<sup>d</sup>.2, north  $0^{\circ}.3$ . The spectrum is superposed and is of Class A.
73840.  $\alpha$  Hydrae.
73898.  $\xi$  Pyxidis. Read 5,10 R, for 5,R.
73914. The line 4077.9 is strong.
73919. The star C. DM.  $-45^{\circ} 4352$ , ptm. magn. 9.2, follows  $0^{\circ}.5$ , south  $0^{\circ}.3$ . The spectrum is superposed and appears to be of Class B8 or A0.
- 73979,80. C. DM.  $-25^{\circ} 6413$  = C. P. D.  $-25^{\circ} 3817$  and 3818. The former star precedes  $0^{\circ}.0$ , south  $0^{\circ}.5$ .
74006.  $\beta$  Pyxidis.
74110. RS Camelopardalis. Variable. Max. 8.2. Min. 8.8. Probably of Class III, and irregular period.
74116. Perhaps of Class B8.
74180. b Velorum. The lines are very narrow and strong lines are present as in the spectrum of  $\epsilon$  Aurigae, H. D. 31964. See H. A. 28, 188, Remark 182, for notes on these lines.
74195.  $\sigma$  Velorum. Read 5,10 R, for 5,R.
74198.  $\gamma$  Cancr. Read 0,10 R, for 0,R.
- 74228,9. A<sup>1</sup> Cancr. The spectrum is composite. The band G and several faint lines of a spectrum of the solar type are seen. He is also stronger than the other hydrogen lines.
74272. n Velorum.
74280.  $\eta$  Hydrae.
74307. S Cancr. Variable. Class V. Max. 8.2. Min. 10.0. Period, 9<sup>d</sup>.484549.
74375. d Carinae.
74395. F Hydrae.
74401. The dark lines are very faint.
74405.  $\theta$  Volantis.
74442.  $\delta$  Cancr. Read 0,10 R, for 0,R.
74508. The star  $-18^{\circ} 2457$ , ptm. magn. 9.6, precedes  $0^{\circ}.9$ , north  $1^{\circ}.2$ . The spectrum is superposed and appears to be of Class K.
74521. b Cancr. Read 0,10 R, for 0,R. This spectrum resembles that of  $\alpha$  Doradus, H. D. 29305. The line K is well marked but lines 4128.1 and 4131.1 are stronger than K.
74575.  $\alpha$  Pyxidis.
74607. In H. A. 56, 85, given as of Class A5, but the spectrum is rather faint on photographs taken with the 13-inch Telescope.
74712. SW Velorum. Variable. Max. 8.8. Min. 9.8. Class and period, unknown.
- 74738,9.  $\iota$  Cancr. Bu. 4763. P. A.  $307^{\circ}.3$ , Dist.  $30^{\circ}.59$ , combined magn. 4.09.
74753. D Velorum.
74772. d Velorum.
74873. A<sup>2</sup> Cancr.
74874.  $\epsilon$  Hydrae.
74884. SX Velorum. Variable. Max. 8.5. Min. 9.3. The period is probably short.
74918. D Hydrae.
- 74946,7. The spectrum is composite.
74956.  $\delta$  Velorum. The line K is stronger than in the spectrum of  $\alpha$  Canis Majoris.
74972. The observation, F5, on I 37628, residual 15, was rejected. The spectrum is too faint and indistinct on that plate.
75021. The spectrum was classified Na on B 18994, but a closer inspection shows that it contains more blue light than Class N.
75063.  $\alpha$  Velorum.
- 75098,9. The spectrum is composite.
75137.  $\rho$  Hydrae.
75149. The lines are narrow, and the spectrum resembles those of  $\epsilon^2$  and  $\eta$  Canis Majoris, which are described in H.A. 28, 183, Remark 96.
75207. The band K appears to be fainter than H, and the spectrum was suspected to be composite. This was not confirmed, however, by the examination of several other photographs.
75209. The spectrum is faint. It may be nearer to Class F than to A.
75219. The lines are narrow. The class is very uncertain.
75222. The line H $\beta$  is suspected to be bright. It is not seen as a distinct dark line.
75241. The line K is strong for this class. The lines may be narrow.
75276. The lines are narrow and sharp. Their intensities resemble those in the spectrum of  $\epsilon$  Aurigae, H. D. 31964, which is described in H.A. 28, 31. The wave lengths and intensities of the lines in the spectrum of  $\epsilon$  Aurigae are given in H.A. 28, 79, Table VII, column 7.
75311. f Carinae. Read 0,10 R, for 0,R.
75416.  $\eta$  Chamaleontis. Read 0,10 R, for 0,R.
75485. The lines are rather narrow.
75486. b Ursae Majoris.
75632. Bu. 4815. P. A.  $44^{\circ}.8$ , Dist.  $4^{\circ}.49$ , magn. 7.5 and 7.6. Proper motion of preceding component,  $1^{\circ}.40$ ,  $255^{\circ}.6$ ; of the following component,  $1^{\circ}.38$ ,  $256^{\circ}.9$ .
75691.  $\gamma$  Pyxidis.
75698.  $\sigma^1$  Cancr.
75710. g Velorum.
75714. The spectrum is indistinct and the class is uncertain.
75732.  $\rho^1$  Cancr.
75754. The spectrum may be nearer to Class F than to A.
75777. The lines are broad.
75821. f Velorum.
75938. The class is uncertain.

# THE HENRY DRAPER CATALOGUE.

76011. S Hydrae. Variable. Class II. Max. 7.5. Min. 13.0. Period, 256<sup>d</sup>. On photographs taken March 24 and November 23, 1890, the spectrum is of Class Ma, having H $\gamma$  and H $\delta$  bright and nearly equal in intensity.
- 76072,3. The spectrum is composite. Also estimated Composite on B 40081, with the remark, "Brighter of Class F<sub>2</sub>, fainter of A<sub>3</sub>." Suspected of variability at Cordoba, and called R Pyxidis. Variability not yet confirmed. The star may be a spectroscopic binary.
76144. The observation, Ko, on B 22237, residual 10, was rejected. The spectrum is too near the edge of that plate.
- 76174,5. The spectrum is composite.
76219.  $\rho^2$  Cancr.
76220. The spectrum has strong absorption lines between H $\beta$  and H $\gamma$ .
76221. X Cancr. Variable. Class III. Max. 6.1. Min. 6.6. Period, irregular.
76227. The lines are narrow.
76294.  $\zeta$  Hydrae.
- 76304,5. The spectrum is composite.
76352. The star  $-10^\circ 26' 1''$ , ptm. magn. 9.0, precedes  $3^\circ 4'$ , south  $1' 2''$ . The spectrum is superposed and is probably of Class K.
- 76369,70. Bu. 4859. P. A.  $360^\circ 0'$ , Dist.  $4''.37$ , combined magn. 6.03. Read 1,10 R, for 1,R.
76398.  $\sigma^2$  Cancr.
76400. T Hydrae. Variable. Class II. Max. 7.0. Min. 13.1. Period, 288<sup>d</sup>.8. On photographs taken April 19, 1895 and August 9, 1904, the spectrum is of Class Mb, having H $\gamma$  and H $\delta$  nearly equally bright.
76431. The spectrum may belong to Class B8.
76483.  $\delta$  Pyxidis.
76543.  $\sigma$  Cancr.
76556. The line K is strong for this class.
76644.  $\epsilon$  Ursae Majoris.
76728. c Carinae.
76734. R T Cancr. Variable. Max. 7.4. Min. 9.3. Class, unknown.
76756.  $\alpha$  Cancr. Read 0,10 R, for 0,R.
76805. H Velorum.
76813.  $\sigma^2$  Cancr.
76822. C. P. D.  $-53^\circ 19' 8'' =$  C. D.M.  $-53^\circ 25' 9''$  and 2560. The latter star follows  $\sigma^2 4'$ , in the same declination. The combined light, reduced to the photometric scale, is given in Table I. Photographic chart plates show that the two stars are of nearly equal brightness. The lines H $\gamma$  and H $\delta$  are broad, and both spectra are probably of Class Ao.
76827.  $\rho$  Ursae Majoris.
76835. The declination of this star is  $2' 6''$  too far south in the Cordoba Durchmusterung.
76852. The line H $\beta$  is suspected to be bright. The dark lines show very slight contrast to other portions of the spectrum.
76868. The spectrum is indistinct on I 37654. Several other plates were therefore examined for confirmation but the lines are not well defined on any of them. It has the appearance of a spectrum of a double star but, if so, the stars are not separated on chart plates.
77002. b<sup>1</sup> Carinae.
77105. The spectrum is suspected to be composite. Line 4077.9 and numerous other solar lines appear to be too strong for Class A<sub>3</sub>.
- 77116,7. H. D. 77116 precedes  $\sigma^2 1'$ , south  $\sigma^2 7'$ . The combined spectrum is hazy and ill-defined. Both are probably of Class K.
77145. The star C. P. D.  $-56^\circ 19' 46''$ , magn. 8.6, precedes  $6^\circ 0'$ , north  $1' 1''$ . The spectrum is superposed, and appears to be of Class A.
77207. The dark lines are too faint to determine the exact class.
77258. w Velorum.
77309. Read 2,10-, for 2,R.
77327.  $\alpha$  Ursae Majoris. The lines are wide.
77350.  $\nu$  Cancr. Read 2,10 R, for 2,R.
77370. b<sup>2</sup> Carinae.
77421. The spectrum is indistinct, due to the superposition of the spectra of adjacent stars.
77427. The spectrum is indistinct and may be nearer to Class A than to F.
77501. The spectrum was classified Ma on I 38198 where it is near the edge and on which the end of greater wave length resembles Class M.
77550. The spectrum is suspected to be composite.
77680. The star C. D.M.  $-34^\circ 55' 19''$ , ptm. magn. 10.3, precedes  $1^\circ 6'$ , north  $1' 0''$ . The spectrum is superposed and is of Class A.
77744. This star has a companion about 0.3 magn. fainter, which precedes  $4'$ , south  $\sigma^2 4'$ .
77800.  $\sigma^2$  Ursae Majoris.
77852. The lines are narrow.

END OF VOLUME 93.



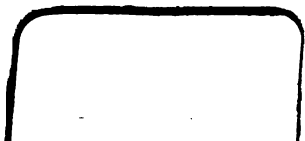




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